

SUNY College Cortland

## Digital Commons @ Cortland

---

Master's Theses

---

5-2015

### The impacts of youth conservation corps on participants: a multi-method examination

Nicholas Justin Prechel

Follow this and additional works at: <https://digitalcommons.cortland.edu/theses>



Part of the [Environmental Education Commons](#), [Environmental Health and Protection Commons](#), [Health and Physical Education Commons](#), [Natural Resources and Conservation Commons](#), and the [Outdoor Education Commons](#)

---

#### Recommended Citation

Prechel, Nicholas Justin, "The impacts of youth conservation corps on participants: a multi-method examination" (2015). *Master's Theses*. 28.

<https://digitalcommons.cortland.edu/theses/28>

This Open Access Thesis is brought to you for free and open access by Digital Commons @ Cortland. It has been accepted for inclusion in Master's Theses by an authorized administrator of Digital Commons @ Cortland. For more information, please contact [DigitalCommonsSubmissions@cortland.edu](mailto:DigitalCommonsSubmissions@cortland.edu).



The Impacts of Youth Conservation Corps on Participants:  
A Multi-Method Examination

By

Nicholas Justin Prechel

A Thesis

Submitted in Partial Fulfillment of the Requirements  
for the Master of Science in Recreation

Department of Recreation, Parks, and Leisure Studies

STATE UNIVERSITY OF NEW YORK  
COLLEGE AT CORTLAND

May 2015

Approved:

---

Date

---

Amy Shellman, Ph.D., Thesis Advisor,  
Associate Professor,  
Department of Recreation, Parks, and  
Leisure Studies, SUNY Cortland

---

Date

---

Anderson Young, Ph.D.,  
Distinguished Teaching Professor,  
Department of Recreation, Parks, and  
Leisure Studies, SUNY Cortland

---

Date

---

Paul A. Schmidt,  
Executive Director,  
Arizona Conservation Corps

---

Date

---

Sharon Todd, Ph.D., CPRP,  
Professor and Department Chair,  
Department of Recreation, Parks, and  
Leisure Studies, SUNY Cortland



## ABSTRACT

### The Impacts of Youth Conservation Corps on Participants: A Multi-Method Examination

Nicholas Justin Prechel  
State University of New York College at Cortland  
2015

The purpose of this study was to examine the benefits that participants receive from serving in youth conservation corps. The entire population of one youth conservation corps was selected to participate in the study during the summer of 2012 trail work season. The study utilized a mixed-method approach that included a one-time pre/posttest with a retrospective pretest adapted from the American Camp Association's Youth Outcomes Battery (YOB) and an open ended interview session. Of the 109 participants in the field at the time, 101 chose to participate in the quantitative survey. The YOB tested four areas: independence, responsibility, teamwork, and affinity for nature. Fifteen participants were interviewed in order to gain a more insightful view of what participants believe they attained from serving in a youth conservation corps.

A MANOVA test determined that there was a statistically significant impact for the overall program in the areas of independence, responsibility, teamwork, and affinity for nature when tested at the .05 significance level. A two-way ANOVA was calculated to compare means between dependent and independent variables and revealed statistically significant interactions between age group and perceived independence, and crew length and perceived independence from pre to posttest. In-depth interviews revealed that participants felt a broader sense of community, experienced greater feelings of empowerment, and developed a variety of skills as a result of serving in a youth conservation corps. It was concluded that participants gained a variety of benefits from serving in a youth conservation corps ranging from increased self-confidence to a closer connectedness to nature.

## ACKNOWLEDGEMENTS

I would like to acknowledge those influences that helped me get to this point in life and set me on a path of success. My parents, Steven and Suann, always believed in me and encouraged me to always try my hardest at everything that I did, urging me to find what makes me truly happy in life and pursue it to its fullest extent.

The professors and lecturers at SUNY Cortland were instrumental during my time there to prepare me for a successful and healthy career in the parks and recreation field. Dr. Amy Shellman was key in helping me brainstorm early on my thoughts on a thesis topic and channeled my passions into something that I could be proud of and fully immerse myself in. Dr. Anderson Young, with his ability to encourage while stimulating intellectual thought, was a source of inspiration early on in my graduate studies, and helped confirm my career choice and desire to further myself through a master's degree. Dr. Sharon Todd saw the potential in me early on and always found a way to keep me involved in the Recreation, Parks, and Leisure Studies department at SUNY Cortland with various jobs and opportunities; allowing me to grow not only my professional experience but also further developed my interpersonal and mentoring skills.

A special acknowledgement is necessary to those organizations and special places in my past years of service work that instilled in me a strong commitment to service learning and conservation work. My ten months of service in Denver with AmeriCorps\*NCCC forever changed my outlook on life and was perhaps one of the most influential times in my life (Alann App, one of the greatest supervisors that I have ever had and perhaps the most impactful mentor of my life). Nine months in Alaska serving

with the Southeast Alaska Guidance Association humbled me by providing some of the most beautiful scenery that I have ever seen and solidified for me a career in conservation and connecting individuals with the outdoors. Two summers of service with the Vermont Youth Conservation Corps granted me countless opportunities in which to grow as a mentor to young adults while showing them the beauty that exists in nature once they unplug from the world. I would like to thank the participants who agreed to take part in my study. Without their support and willingness to speak about their experiences, this thesis would have never formulated.

Finally, to my close friends that helped me through this process, who pushed me to stick with it when I felt the end would never come and listen to me complain when things just would not make sense, I sincerely thank you for staying by my side.

It was through these experiences and individuals that I was inspired to pursue this thesis with the intent of raising awareness for the effectiveness of such programs to change an individual while benefitting the environment and increasing recreational opportunities. It is my hope that I accurately and effectively communicated the participants' feelings and desires to provide clear statistical evidence that such programs are effective in order to make such opportunities available to more people in the future.



## TABLE OF CONTENTS

ABSTRACT .....	iv
ACKNOWLEDGEMENTS .....	v
TABLE OF CONTENTS .....	vii
LIST OF TABLES .....	x
LIST OF APPENDICES .....	xi
 <b>CHAPTER 1 - INTRODUCTION.....</b>	<b>1</b>
Statement of the Problem .....	5
Research Questions .....	6
Assumptions .....	6
Delimitations .....	6
Limitations .....	7
Definition of Terms .....	7
 <b>CHAPTER 2 - REVIEW OF LITERATURE .....</b>	<b>10</b>
National Service .....	11
Youth as Volunteers .....	14
Environmental Volunteers.....	17
Youth in Environmental Service .....	19
 <b>CHAPTER 3 - METHODS .....</b>	<b>24</b>
Study Design .....	24
Subjects and Subject Selection.....	26
Instrumentation.....	27
Program (Treatment) .....	29
Collection of Data .....	33
Data Analysis .....	35

Survey .....	35
Interviews.....	35
<b>CHAPTER 4 - RESULTS .....</b>	<b>37</b>
Quantitative Survey Results .....	38
Sample and Response Rate .....	38
Analysis.....	41
Survey Conditions Sheet.....	41
Instrumentation Validity and Reliability .....	41
Statistical Tests .....	42
Survey Additional Comments.....	46
Qualitative Interview Results .....	47
Sample.....	47
Interview Findings .....	49
Theme 1: Community .....	49
Sub-Theme 1: Relationships .....	50
Sub-Theme 2: Teamwork .....	51
Sub-Theme 3: Social Support .....	53
Sub-Theme 4: Diversity .....	54
Theme 2: Empowerment.....	55
Sub-Theme 1: Independence.....	56
Sub-Theme 2: Confidence .....	57
Sub-Theme 3: Accomplishment .....	57
Theme 3: Skills .....	59
Sub-Theme 1: Leadership .....	60
Sub-Theme 2: Problem Solving.....	62
Sub-Theme 3: Risk Assessment.....	63
Summary .....	64

<b>CHAPTER 5 - SUMMARY AND CONCLUSIONS .....</b>	<b>65</b>
Summary of Procedures .....	66
Summary of Findings .....	67
Research Question 1 .....	67
Research Question 2 .....	69
Research Question 3 .....	70
Conclusions .....	71
Limitations .....	72
Implications .....	74
Recommendations .....	75
 <b>REFERENCES.....</b>	<b>77</b>
 <b>APPENDICES .....</b>	<b>85</b>

## LIST OF TABLES

Table 1.	Sample Question – Affinity for Nature Scale.....	28
Table 2.	Sample Demographics.....	39
Table 3.	Crew Types and Duration .....	40
Table 4.	MANOVA Pretest & Posttest Means and Gains by Scale .....	44
Table 5.	Gains for Age Group in Independence Scale .....	45
Table 6.	Gains for Crew Length in Independence Scale .....	45
Table 7.	Interview Population .....	49

## LIST OF APPENDICIES

<b>APPENDIX A:</b> Informed Consent Letter.....	86
<b>APPENDIX B:</b> Quantitative Survey .....	88
<b>APPENDIX C:</b> Qualitative Interview Questions .....	94
<b>APPENDIX D:</b> Survey Conditions Sheet .....	96
<b>APPENDIX E:</b> Survey Checklist .....	98
<b>APPENDIX F:</b> Survey Instructions .....	100
<b>APPENDIX G:</b> Institutional Review Board Approval .....	102

## **Chapter 1**

### **INTRODUCTION**

Modern conservation corps can trace their early roots back to the Civilian Conservation Corps (CCC) of the New Deal Era following the Great Depression. President Franklin D. Roosevelt proposed a service corps that would give employment to 250,000 young men earning a meager wage while completing conservation-based projects on our nation's lands (National Park Service [NPS], 2011). They completed a wide variety of projects in their five-year history beginning in 1937. They performed fire mitigation with the United States Forest Service and built trails in many of our National Parks, responded to natural disasters, and planted millions of trees in an effort to reclaim the once plentiful landscape (NPS, 2011). With the outbreak of World War II in Europe, the importance of the work that the CCC completed diminished. By 1942 all CCC camps were closed down and replaced by military bases.

The ideas behind the Civilian Conservation Corps did not reappear until President Lyndon B. Johnson declared his 'War on Poverty' in 1965 and signed into law the Job Corps (NPS, 2011). This government-funded program provided opportunities for underserved young adults to receive vocational training to provide them with career options upon graduation.

In 1976 the California Conservation Corps began to serve the natural areas in the state of California (The Corps Network, 2012). Other conservation corps soon followed in other states. Throughout the 1980's and into the early 1990's conservation corps began serving the community and the environment. Founded in 1985, The Corps Network brings a voice to 127 conservation corps throughout the nation. The mission of The Corps Network is 'to provide national leadership and promote the growth and quality of its member Corps' (The Corps Network, 2012). Not only does The Corps Network provide a voice to conservation corps throughout the nation, they provide potential funding opportunities and high priority projects to local conservation corps. They further promote communication amongst various corps by serving as a liaison to share best practices and promote innovative thinking across the board (The Corps Network, 2012).

In 1993, President Clinton signed into law the National Community Service Trust Act, which created the Corporation for National and Community Service (CNCS) and subsequently AmeriCorps, to act as a funnel through which the federal government could provide funds to not-for-profit agencies (Sagawa, 2007; Perry, Thomson, Tschirhart, Mesch, & Lee, 1999). This offered a tremendous boost for emerging conservation corps struggling to attain funds and provided opportunities for young adults to learn and prosper in the outdoors.

In April of 2009, President Obama signed into effect the Edward M. Kennedy Serve America Act reauthorizing AmeriCorps demonstrating strong, continued support towards national service. The Serve America Act also further expanded the CNCS influence by investing in individuals, nonprofits, and communities to help them succeed and attain their goals. The Act approved the expansion of AmeriCorps by tripling its size

to 250,000 members by 2017, increased the amount of the Segal AmeriCorps Education Award, created a Summer of Service program to provide education awards to rising 6<sup>th</sup>-12<sup>th</sup> graders, and established September 11 as a National Day of Service and Remembrance (The Edward M. Kennedy Serve America Act, 2009).

A further review of the literature revealed that a number of investigations and studies have been completed seeking to determine the value and worth of investing government funds in such programs. A comprehensive longitudinal study over eight years was completed by Yamaguchi, et al. (2008) to assess the long-term impact of AmeriCorps service on its alumni. The study looked at participants' engagement before and after their involvement in the AmeriCorps program. Members of AmeriCorps programs reported higher life satisfaction and credited their AmeriCorps experience in helping them attain a job upon completion of their service term. Results were mixed with respect to personal growth, cultural and diversity awareness, and confidence in working with governmental organizations (Yamaguchi et al., 2008).

Frumkin, et al. (2009) completed a study that analyzed the impact AmeriCorps involvement had on service member's civic engagement, education, employment, and teamwork/life skills. The study consisted of 2,000 members of AmeriCorps 'State and National' and 'National Civilian Community Corps (\*NCCC)' as well as a group of 2,000 nonmembers that served as the control (Frumkin et al., 2009). Results from the study concluded that AmeriCorps involvement generated positive and statistically significant impacts on its member's attitudes and behaviors. Positive impacts of the program were also notable in civic engagement and employment outcomes illustrating the effectiveness of the AmeriCorps programs.



Various other studies focused on the cost-benefit ratio of such programs (Sagawa, 2007), valuable job skills attained while serving (Sagawa, 2007), lifelong volunteers (McAdam & Brandt, 2009; Marks & Jones, 2004; Astin & Sax, 1998; Berger & Millem, 2002) and motivations for volunteering (Gallini & Moely, 2003).

Cushman (1954) is credited by many as giving birth to the idea of a youth conservation corps. Her thesis focused on the need to provide opportunities for a student conservation corps which would not only benefit the individual, but the National Park Service and the nation as a whole (Cushman, 1954). Since Cushman's call for a student conservation corps in 1954, limited follow up studies have been completed examining the motivations for participating in conservation corps and the overall effect that conservation corps has on the individuals that serve in them.

Studies focused on environmental volunteers found that seeing the actual tangible results of their labor ranked amongst the highest reasons for volunteering as well as the structure and instruction that was provided throughout the experience (Ryan, Kaplan, & Grese, 2001). Bruyere and Rapppe (2007) found in their mixed methods study that concern for the environment ranked high amongst those surveyed.

Kals, Schumacher, and Montada (1999) pioneered the emotional affinity toward nature scale that is used by a number of outdoor youth organizations to assess the quality of their programs (ACA, 2007). Their research introduced the, "concept of embracing various inclinations toward nature such as the love of nature" (Kals, Schumacher, & Montada, 1999, p.180). Their results stressed that youth experiences with nature should be educationally integrated to have strong influences in transmitting nature values to them, thereby increasing the possibility that contact with nature is continued.

The U.S. Department of Interior released statements regarding the importance of connecting youth to the outdoors and nature at an early age (Department of Interior [DOI], 2009). The Obama administration allocated necessary funds in excess of \$70 million to create a 21<sup>st</sup> Century Youth Conservation Corps (DOI, 2009). This initiative provided opportunities for youth to explore the outdoors but also learn about potential career options in nature through environmental education. Opportunities will continue to exist for youth in conservation corps in the future (DOI, 2009), but more research is needed to ensure that both the provider and the recipient are receiving the maximum benefit available.

### ***Statement of the Problem***

Numerous studies have been completed on youth engagement (McAdam & Brandt, 2009), service workers (Yamaguchi et al., 2008), volunteerism (Ryan, Kaplan & Grese, 2001), and youth in the environment (Price, Williams, Simpson, Jastrzab, & Markovitz, 2011). However, limited studies have looked at the benefits individuals receive while working for an environmental service organization, such as a conservation corps. The purpose of this study was to examine the impact that conservation corps has on youth participants. Specifically, this study sought to determine how levels of independence, responsibility, teamwork, and affinity for nature changed upon completion of a term of service in a youth conservation corps. This study also sought to determine how participants describe their experience in their own terms and what benefits they felt they derived from serving in a youth conservation corps.

### ***Research Questions***

1. Does participation in Youth Conservation Corps (YCC) increase participants' perceived level of independence, responsibility, teamwork, and affinity for nature?
2. What interpersonal benefits do participants receive from serving in a YCC?
3. What do participants consider to be the most beneficial outcomes of their YCC experience?

### ***Assumptions***

It is assumed that study participants answered survey and interview questions honestly and to the best of their ability. It is further assumed that moderators of the survey correctly administered the survey as they were instructed to, reading all instructions to participants prior to disseminating the survey.

### ***Delimitations***

The scope of this study focused on one summer conservation corps experience during the summer of 2012. Participants are typically native to the state in which the conservation corps is located, between the ages of 16-24 and are eligible to serve multiple terms.

### ***Limitations***

This study only focused on one conservation corps, as such, it may not accurately represent the entire conservation corps network that spans the entire United States and the world. Since participants voluntarily sign up to serve in a youth conservation corps, some degree of environmental interest likely exists. The demands of a conservation corps experience typically require members to complete conservation work that is physically demanding in the out of doors in all weather conditions and sometimes under somewhat strenuous conditions. There is no way in which to establish ahead of time the particular circumstances participants will encounter during their experience.

### ***Definitions of Terms***

1. *National service* – an organized period of substantial engagement and contribution to the local, national, or world community, recognized and valued by society, with minimal monetary compensation to the participant (Sherraden, 2001). Sagawa (2007) further expands this definition to detail the major areas of concentration consisting of education, community health, environmental conservation and alternative energy opportunities, and economic and social mobility. National service laws prohibit the use of participants to displace paid employees.

2. *AmeriCorps (AC)* – “A national service program that engages 80,000 individuals in intensive, results driven service each year. The program addresses the needs of communities in the areas of education, the environment, public safety, disaster relief and other human needs. Furthermore, it increases the capacity of nonprofit organizations to serve their communities by mobilizing volunteers, expanding services, raising funds, and creating sustainable programs” (Corporation for National & Community Service, 2010, p.7). Three main areas make up the AmeriCorps network; they include AmeriCorps State and National, AmeriCorps NCCC (National Civilian Community Corps) and AmeriCorps VISTA (Volunteers in Service to America).
3. *Crew member (service member/corps member/CM)* – Individuals that typically sign a contract for a pre-determined service term that lasts anywhere from 3 to 18 months wherein they are paid a modest living stipend and may be eligible to receive an education award at the termination of their service that can be used to pay for higher education or to repay qualified student loans (Frumppkin et al., 2009; Sagawa, 2007).
4. *Volunteer* – Volunteering is about choice, so the most basic tenet of any volunteering definition is that it is done of one's own free will (Bushway, Dickinson, Stedman, Wagenet, & Weinstein, 2011).
5. *Environmental sensitivity* – Interest in learning about the environment, feeling concern for it, and acting to conserve it, on the basis of formative experiences (Chawla, 1998).

6. *Youth Conservation Corps (YCC)* – State and local programs that engage primarily youth and young adults ages 16-25 in full-time community service, training and educational activities. Conservation corps serve in over 45 states and engage more than 30,000 young adults each year in completing high priority conservation work for the nation (The Corps Network, 2012).
7. *Independence* – The American Camp Association (2009) describe independence as, “...relying less on adults and other people for solving problems and for their day-to-day activities.” Chirkov, Ryan, Kim, and Kaplan, (2003) more broadly interpret *independence* as, “The circumstance of not relying on others for support, help, or supplies” (p. 98).
8. *Responsibility* – “The tendency to accept the consequences of one’s own actions” (Sibthorp, Bialeschki, Morgan and Browne, 2013, p. 517).
9. *Teamwork* – Henderson (2013) speaks of *team building* in the camp environment as one that, “...incorporates dimensions of positive youth development such as competence, caring, connection, and belonging within a group” (p. 1). Larson, Hansen, and Walker (2005) found in their study on teamwork that youth reported, “(a) learning how to accept other’ viewpoints, (b) giving people space to complete a task in their own way, (c) recognizing individual differences and (d) working together” (p. 178).
10. *Affinity For Nature* – According to the American Camp Association, their affinity for nature scale, “...encompasses four primary domains: general feelings of attraction to nature, feelings of freedom, feelings of comfort, and feelings of oneness” (ACA, 2007, p. 3).

## **Chapter 2**

### **REVIEW OF LITERATURE**

The purpose of this study was to better understand the benefits that individuals derive from serving in a youth conservation corps. A number of studies have been completed in a range of related fields focusing on the effect of national service (Frumkin et al., 2009; Yamaguchi et al., 2008), youth as volunteers (Gallini and Moely, 2003; McAdam and Brandt, 2009), and environmental volunteers (Ryan, Kaplan, and Grese, 2001; Bruyere and Rappe, 2007).

An important distinction must first be made before exploring the literature any further between the definitions of service members and volunteers, as the terms are not mutually exclusive. Service members are different from volunteers. Volunteers are permitted to come and go as they please since they are not obligated to work and are able to complete work as their schedule permits. Service members sign a contract for a pre-determined term of service, in which they receive a modest living stipend and typically have food and housing paid for. Service members tend to be more reliable than volunteers in that they show up each day, as if reporting to a job.

As limited studies have been completed examining the benefits received by youth service members, specifically in environmental service, it is necessary to draw from the

research completed on studies of national service, youth volunteers, and environmental volunteers to illustrate a better perspective of how youth in environmental service benefit from such programs. The focus of this literature review was to better understand service member's benefits while completing environmental service specifically focusing on the benefits to youth.

### *National Service*

A comprehensive eight-year longitudinal study was completed by Yamaguchi, et al. (2008) to assess the long-term impact of an AmeriCorps service on its alumni. The study looked closely at participants' engagement before and after their involvement in the AmeriCorps program. Data were collected from various AmeriCorps programs in the 'State and National' and the 'National Civilian Community Corps (\*NCCC)' programs to attain a wide range of responses. Their study found that members in both the test and control group demonstrated high levels of civic engagement, volunteering, and voting initially, however, AmeriCorps members continued to show these high levels over the eight year study. Members in the \*NCCC showed a statistically significant increase in connection with communities and neighborhoods, while State and National members were significantly better at identifying and understanding community problems. Members of both programs reported higher life satisfaction and credit their AmeriCorps experience in helping them attain a job after they completed their service term. Results continued to be mixed throughout the remainder of the study when looking at areas of personal growth, cultural and diversity awareness, and confidence in working with governmental organizations. The study suggested further research was needed to better



assess continued involvement in service activities as AmeriCorps was a relatively young program at the time of the study.

Frumkin, et al. (2009) completed a study that analyzed the impact AmeriCorps involvement had on participants' civic engagement, education, employment, and teamwork/life skills. The study consisted of 2,000 members of AmeriCorps 'State and National' and 'National Civilian Community Corps (\*NCCC)' as well as a group of 2,000 non-members that served as the control in this study. Results from the study concluded that AmeriCorps involvement generated positive and statistically significant impacts on its members' attitudes and behaviors as it relates to perceived levels of civic engagement, education, employment, and teamwork and life skills. The State and National program saw gains in all tested areas in both the short-term as well as the long-term; while the \*NCCC program had mixed results for the short term and less consistent long-term results as compared to the State and National program. Further studies were encouraged to more effectively measure the qualitative impacts of service, including conducting in-depth interviews with members who have served, as well as community members impacted by their service.

The wide variety of functions that service members provide makes them an extremely versatile tool that could be utilized in a number of different capacities. Perry, Thomson, Tschirhart, Mesch, and Lee (1999) viewed the benefits of service corps as a "Swiss army knife, being a program that can perform numerous useful functions in one affordable package (p. 225)." The flexibility of such programs to go where they are most needed makes them a valuable asset to the community and a cost effective investment. The cost-benefit ratio in certain programs surveyed put the benefit at 2.4 to 1, for every

one dollar invested in an AmeriCorps program, it provided 2.4 dollars of service benefit in return. This only consists of the service work performed, not including the benefit to the member. Perry, et al. found increases in participants' personal, professional, and social skills (e.g. self-confidence), as well as an increased awareness of the needs of the community and the efficacy of their direct service activities. When provided the opportunity to train other volunteers in the associated tasks, the return on investment is further increased as is the effect it has on bolstering the service members' level of civic engagement.

The work that service members complete is in areas that are often times unmet by either the private or government sectors. Sagawa (2007), completed a summary for the Center for American Progress that stressed the important role that service members play in developing non-profit organizations, meeting the needs of the community, and completing other high priority work. The ability of national service programs to attract talented individuals and put their skills to good use and benefit of others continues to be its most desirable trait. In addition, various programs were cited having emerged in recent years concerned with environmental conservation such as the Earth Conservation Corps, Mile High Youth Corps, and American Youthworks Environmental Corps. Each one of these opportunities provides youth with valuable job skills while at the same time allowing them to serve the environment by planting trees, building trails, removing trash from scenic waterways, and preserving parks. Opportunities such as these have been shown to have a tremendous impact on youth in their teenage years. Service corps provide an avenue in which to learn valuable job skills and become more involved with the community and environment when traditional classroom teaching techniques are not

enough. Estimates on the cost of providing this benefit to youth are still in contention, some say as high as \$20,000 per person (Sagawa, 2007). However, the return on the investment can range from \$500,000 to as high as \$1 million over the lifetime of the individual if the youth has a criminal record. Such opportunities can instill strong values in youth that can provide a firm foundation from which to launch successful future careers that can lead to a more fulfilling life.

### ***Youth as Volunteers***

In an effort to get more of our nation's youth involved in volunteering and service related work, many high-schools mandate completion of a certain number of 'community service' hours in order to graduate. McAdam and Brandt (2009) found by the late 1990's that 64 percent of all public schools and 83 percent of public high schools surveyed mandated that students complete some sort of community service as a requirement for graduation.

Regarding long-term civic engagement, McAdam and Brandt (2009) found that voluntary organizations appeared to have a positive effect on participants' level of involvement throughout their lives. Post high-school longitudinal studies were completed regarding both school and non-school activities that showed a positive result even after the factors of marriage and children were taken into account. Those individuals who were voluntarily involved at a young age were more likely to continue to do so throughout their lives. McAdam and Brant (2009) noted the potential bias that existed involving the level of commitment that an individual already possessed prior to participating in such programs in the first place. This stresses the idea of *volunteering* for activities that

typically differs from most school's policy that has *mandatory* volunteer hours as a requirement for graduation (Stukas, Snyder, & Clary, 1999). Whether or not this mandated social involvement in public schools is proved beneficial to individuals and the community remains inconclusive (McAdam & Brandt, 2009).

Metz and Youniss (2003) conducted a longitudinal study over the period of five years to study the impact school required service had on high-school participants in a suburban Boston, MA high-school. Students were required to complete 40 hours of community based service as a requirement for graduation. The study sought to explore whether students continued to do voluntary service after completing their required service term. A sample population of 484 students were selected to participate in the study; 312 were required to complete service and the remaining 172 served as the control group and were not required to complete mandatory service. Results supported the claim that after completing mandatory service, students in the test group were more inclined to complete service in the future than students in the control group. Those students who were more inclined to volunteer completed their mandatory hours immediately and continued to volunteer throughout the duration of the study period. Students who were less inclined waited towards the end of their time in high school to complete their hours, yet indicated increased intentions of continuing to volunteer beyond the requirement. Metz and Youniss further found that females were more likely to complete *voluntary* service (i.e. not as a requirement), had parents who volunteered, were more religious, belonged to school organizations, and had higher grade point averages.

Youth who choose to volunteer their time freely have been found to be more active in communities and have a greater variety of options available to them later in life.

Moreover, McBride, Pritzker, Daftary, and Tang (2006) found cross cultural exposure has increased in service in the past decade and provides youth opportunities that may not have been available to their parents a generation ago. But why do young adults choose to volunteer their time instead of spending it with friends or working a part time job? Youth were found to volunteer for any number of reasons, most commonly to build their resume in preparation for college admittance and the prospect of a job in the near future (McBride et.al, 2006, p72).

Youth service is very much in line with the realm of national service work being, “unique because of their explicit dual focus on the servers and the served” (McBride et al., 2006, p. 74). Not only does the work benefit the beneficiary it also benefits the participant. With extended service-work opportunities youth sign a contract committing themselves to fulfill a full-time term, where upon completion they may be eligible for a post-service award. These are typically in the form of education awards used to pay for college or pay back student loans, or in the form of a lump sum payable upon completion.

Marks and Jones (2004) found that students who socialized in communities at an early age continued to volunteer in the transition between high-school and throughout college. Continued student engagement was further enhanced though early involvement in after-school organizations such as Boy/Girl Scouts, Boys and Girls Clubs and parents who volunteered themselves. In addition, involvement in community service activities in high-school increases the probability that students will continue to serve their community in college (Astin & Sax, 1998; Berger & Milem, 2002; Marks & Jones, 2004). Although these actions might not always benefit the individual, they have the opportunity to powerfully benefit others (Marks & Jones, 2004).

Gallini and Moely (2003) found that young adults who engage in volunteer work throughout their younger years are more engaged with the community and have a better overall understanding of events that affect the community later in life. The work they accomplish through volunteering provides them with a sense of pride, boosting their self-esteem, and enhancing confidence in their own abilities to achieve positive results. The feeling of helping others while learning valuable life skills makes the experience that much more enjoyable (Gallini & Moely, 2003, p.12). Also, the skills that they obtain transfer directly into the professional realm, and their ability to handle stressful and challenging situations while dealing with people of different backgrounds is made simpler through continued involvement (Gallini & Moely, 2003, p.11).

### ***Environmental Volunteers***

Motivations for volunteering for a particular organization differ from individual to individual. It is important to identify what the motivating factor is for each individual so the commitment can be rewarding for both the individual and the organization. Ryan, Kaplan, and Grese (2001) examined motivational reasons behind environmental volunteers. They found the highest ranked motivation was helping the environment, which included seeing direct, real time improvements to the environment by helping to restore the natural area. Other motivating factors that ranked highly in Ryan, Kaplan, and Grese's study included 1.) Being able to identify specific species of plants and pass that information along to others, 2.) Good degree of organization for the project they were participating in, and 3.) Gaining the feeling that the work that they were completing was necessary and appreciated.

Bruyere and Rappe (2007) also explored the motivations for environmental volunteers. Both quantitative and qualitative responses were utilized in this convenience study, resulting in similar outcomes. Their study sample of 401 volunteers from six different organizations found participants' concern for the environment was at the very top of the list of motives. This aligns itself with the previously explored findings of Ryan, Kaplan, and Grese (2001) and notes that by providing targeted, meaningful opportunities the volunteers' experience will be enhanced and will encourage them to return to complete additional service in the future. The desire to give back something to the area in which they serve, getting outside, and the importance of feeling needed further enhanced volunteer retention. With more governmental organizations facing budget cuts, the value of volunteers and the work they provide is increasing. Environmental service programs can provide valuable learning opportunities about local ecology, encourage social relationships with other likeminded individuals, and provide a boost in self-esteem by encouraging participants to take pride in completing a project.

Bruyere and Rappe (2007) note that different age demographics volunteer for different reasons and it is important to cater program offerings to specific demographics in order to enhance the volunteer experience. Also, by also explaining the importance of the work being completed, how it fits into the bigger picture, and giving positive acknowledgement and allowing participants to take recognition for their work, organizations can help attain and attract new volunteers to their cause.

The value behind the service that volunteers provide for the organizations they serve often far exceed the time and effort it takes to train them to complete the tasks. Bremer and Graeff (2007) looked at volunteer services in German National Parks and

found that volunteers provide new ideas, thanks to their high commitment, and are worth the time it takes to properly train them. Although paid staff need to spend time orienting the volunteers to the assigned duties, the quantity of work that they are able to complete relieves paid staff of some of their duties permitting them to focus elsewhere. Park administrators were noted as being generally satisfied with the work that the volunteers completed and found that recognition for the volunteers efforts ranked highly amongst those interviewed. By utilizing volunteers, these parks were able to strengthen ties with the local community, enhance positive experiences with nature and provide a reciprocal relationship that was mutually beneficial to both participant and organization with each fulfilling needs sought by the other.

### ***Youth in Environmental Service***

The benefit of utilizing the outdoors as an effective classroom for youth has been the topic of discussion in recreation fields in recent years. Famed outdoor youth movement advocate and author Richard Louv (2007) published a follow-up article to his bestselling book *Last Child in the Woods*. In it stresses the importance of getting youth outside, participating in activities and enjoying what nature has to offer. Hundreds of teachers across the United States have realized the importance behind Louv's message and have implemented his ideas in their classrooms (Bailie, 2010; Feature, 2007). He made famous the term 'nature-deficit disorder,' which describes the lack of outdoor experiences that youth today have available to them. Not all youth learn well in the classroom, so Louv suggests moving that classroom outdoors and letting children explore the world around them. By getting children outdoors in early childhood, educators can



begin to create outdoor enthusiasts at a young age which will likely lead them to take better care of the Earth in their adulthood.

Statements released by the United States Department of Interior (DOI) stressed the importance of connecting youth to the outdoors and nature at an early age (2009). The Obama administration allocated necessary funds in excess of \$70 million to create a 21<sup>st</sup> Century Youth Conservation Corps (DOI, 2009). This initiative provides opportunities for youth to not only explore the outdoors, but also learn about potential career options in nature through environmental education. Through these programs young Americans are able to experience nature first hand while working in cooperation with various DOI agencies such as the United States Fish and Wildlife Service (USFWS), Bureau of Land Management (BLM), United States Geological Survey (USGS), and the National Park Service (NPS). These learning opportunities not only provide valuable insight into federal agencies; they also provide employment for youth that participate in these programs.

In a separate but related briefing from the DOI, Secretary of the Interior Ken Salazar discussed his commitment to youth service. In June 2009, Secretary Salazar signed a Secretarial Order establishing the Office of Youth in Natural Resources as part of the Department of the Interior (DOI, 2010). In the 2010 year, the National Park Service invested \$15.5 million in its Youth Conservation Corps and in the Student Conservation Association (SCA) to provide opportunities for youth ages five to twenty-five to enable them a closer connection with the great outdoors (DOI, 2010). Action Item 1.3b in the Youth Agenda for America's Great Outdoors states, "Expand capacity to build on and promote partnerships and programs on public lands that connect people to the outdoors through meaningful volunteer service opportunities relating to restoration

and education (DOI, 2011).” Continued growth in these and other programs offered by the federal government are expected in future years as more Americans become increasingly engaged in the outdoors (Cole, 1996).

Government promotion of outdoor related service activities is not a recent revolution. National Parks Service Director Fran Mainella (2002) stressed the importance of youth service corps and the working relationship that the NPS has built with them over the past 40 years. The purpose of such programs has been to help youth understand their vital role in preserving our nation’s heritage through service learning. They are provided with opportunities to visit national parks, monuments, and historic sites administered by the NPS learning more about them, strengthening the association with the work and the beneficiaries. Education programs sponsored through the NPS, such as *Parks as Classrooms*, assist schools in providing educational opportunities outside typical classroom environments. Programs such as these provide youth with opportunities not otherwise available to them, such as urban youth visiting a national park or monument far outside the city in which they live.

The National Park Service is mandated by Congress to spend at a minimum \$2 million of its appropriated budget promoting its Youth Conservation Corps program meant to engage young men and women from different social, ethnic, and economic backgrounds (Mainella, 2002). The intended result is to spark interest in youth in protecting and preserving our national heritage through educating them on topics concerning the parks. Further intentions include providing them with the opportunity to learn more about potential careers in the National Parks Service and encourage a life-long awareness and commitment to preserving our national parks.

Conservation corps operate in over 46 states in the union and employ over 33,000 young adults annually by completing high priority work essential in maintaining our nation's parks, forests, and wilderness areas (The Corps Network, 2012). Former director of The Corps Network, Sally Prouty (2009) stated that the effects of serving in a youth conservation corps satisfy both the immediate desire for accomplishment and the long term benefit of lifelong skills. Becoming connected through hands on work with nature is one way that youth are able to discover the great outdoors and discover themselves. Flexibility and adaptability are two characteristics that enable conservation corps to continue to be successful for both the beneficiaries and the participants. Serving in a youth corps allows the participants to be held accountable for their actions, such as showing up on time for work, responsibility for getting camp chores done and looking out for fellow corps members safety. Members are empowered through serving, having opportunities presented to them that might not otherwise be present in other jobs.

Price, Williams, Simpson, Jastrzab, and Markovitz (2011) conducted a study for members in 21 separate Youth Conservation Corps that was representative of the population of conservation corps across the United States at the time. They examined the impact of sample members in the areas of education, employment, civic engagement and life skills, and risky behaviors. Of the 893 who participated in a satisfaction survey of their experience, 804 were satisfied or very satisfied with their overall youth corps experience and 87 percent of those sampled said that they would recommend the experience to a friend. Participants stated that they were somewhat or very satisfied with their YCC experience in terms of gaining skills for getting a better job/career, advancing

their education, exploring future job/education interests, and having a job that would look good on their resume (Price et al., 2011).

Until recently, no set standards or guidelines existed for what a conservation corps should strive to achieve. In 2011, The Corps Network (TCN) having long been a ‘voice’ for the nation’s conservation corps, created standards by which to promote high quality programming for conservation corps across America. By allowing conservation corps to be subject to an in-depth review of general operations, financial management, risk management, governance standards, and corps operations by TCN, corps are now able to demonstrate their accountability to both crew members and their communities (The Corps Network, 2014). These accreditation standards are similar in scope to what the American Camp Association (ACA) has for camps and what the National Recreation and Park Association (NRPA) has for parks and recreation agencies. Independent accreditation provides the assurance of quality that partners, particularly publicly-funded government agencies and donors, look for and recognizes a conservation corps ability to provide safe, appropriate, and meaningful experiences while meeting community and conservation needs (The Corps Network, 2014).

This review of the literature explored the importance of national service (Frumkin et al., 2009) and the continued impact that environmental volunteer opportunities have on participants as well as the organizations that they serve (Ryan, Kaplan, & Grese, 2001). However, limited studies have been completed that specifically examine the topic of youth service in conservation corps and the impact that it has on them. Opportunities will continue to exist for youth in conservation corps (DOI, 2009), but more research is needed to ensure that both the provider and the recipient are receiving optimal benefit.

## **Chapter 3**

### **METHODS**

This study was conducted to assess the impact that conservation corps had on youth participants. A mixed methods approach was utilized in order to increase rigor and gain a more holistic understanding of corps experiences on youth. The quantitative portion of this study focused on four particular traits: independence, responsibility, teamwork, and affinity for nature. This study surveyed 109 youth ranging in age from 16-24 years of age and coming primarily from the state in which the conservation corps was located. A subset of this population was further purposefully selected to participate in an in-depth interview to better understand the intrinsic rewards that participants received from serving in a youth conservation corps. Twenty-one participants were invited to speak to the researcher for as long as was necessary regarding their conservation corps experience. Probes were utilized as necessary in order to stimulate the conversation.

#### ***Study Design***

This study used a single group pretest/posttest with a retrospective pretest design to assess changes in conservation corps participants' perceived level of independence, responsibility, teamwork, and affinity for nature. The retrospective design was initially

created to take into account the ‘response shift bias’ that can be prevalent in more traditional tests where the pretest is administered at the start of the treatment and the posttest is done at its completion (Howard & Dailey, 1979). Howard et al. (1979) were among the first to pioneer this term and defined it as, “a program-produced change in the participants’ understanding of the construct being measured” (p. 19). Pratt, McGuigan, and Katzev (2000) found that when the response shift bias is present, “a retrospective pretest methodology produces a more legitimate assessment of program outcomes than does traditional pretest/posttest methodology” (p. 347). Use of this design allows participants to have a better understanding of their own knowledge regarding their skills and abilities at the conclusion of their term and how they might have been affected from serving in the youth conservation corps (Goedhart & Hoogstraten, 1992; Terborg, Howard, & Maxwell, 1980).

Shortcomings of the retrospective design were recognized by Pratt, McGuigan, and Katzev (2000) such as what is referred to as ‘demand characteristics’ meaning participants may skew their results in order to please the program provider, thus causing a change in the scores. Participants’ may also feel that a change *should have* occurred based on their participation in the program, also potentially skewing results (Conway & Ross, 1984; Pratt, McGuigan, & Katzev, 2000).

Semi-structured interviews with prompts were utilized to gain further insight as to how participants’ described their own experience and the benefits they felt they derived from serving in a youth conservation corps. Findings from these data were compared to the quantitative results to gain a more holistic understanding of the impact of youth conservation corps experiences.

### *Subjects and Subject Selection*

Participants in the study were young adults ages 16-24 who were pre-selected by the cooperating organization to serve in the conservation corps for the summer of 2012. Participants largely came from the state in which the cooperating organization was located, although this was not a requirement to serve in the conservation corps, and the exact number of native and non-native participants was not known to the researcher. The entire study population of 109 participants enrolled in the program were asked to complete the survey instrument. No identifying marks of any kind were necessary for participants to complete the survey. Informed-consent letters were presented to parents or participants (if they were over 18 years) on the orientation day of the program asking them to participate in a survey (Appendix A). No prior relationship existed between the researcher and participants as all crew members had been pre-selected by the cooperating organization to serve during the summer of 2012.

Twenty-one participants were purposefully selected from a master list of participants in the field at the time and invited to participate in a semi-structured, in-depth interview with the researcher. Participants were chosen based on their age, gender, type of crew, and number of times served in the conservation corps. As these participants were not known to the researcher, every precaution was taken to ensure their confidentiality. Names were only used to select participants from the master list of potential participants. When referencing an interview participant in subsequent research reports or articles, interviewees are referred to as "Participant 1, 2, 3, etc.", their gender and age.

### *Instrumentation*

The instrumentation utilized for the quantitative survey was a subset of the Youth Outcomes Battery (YOB) developed by the American Camp Association (ACA). The YOB was selected as it aligns itself closely with the content of the conservation corps experience and serves a similar, yet slightly older demographic (YOB 10-17 years, YCC 16-24 years). As such, the particular YOB scales selected for use in this particular study were designed to measure changes in perceived independence, responsibility, teamwork, and affinity for nature.

The process of developing the YOB in 2006 began by establishing a classical test theory foundation. Once the scales were developed, they went through a rigorous psychometric pilot testing phase that consisted of eleven camps and 791 campers (ACA, 2007). Psychometric evaluation included examination of the internal structure of the individual instruments as well as a cross-structure analysis (ACA, 2007). All reliability coefficients exceeded .90 and all item-to-total correlations were greater than .50 (ACA, 2014). Since its publication in 2007, the YOB has been used as an effective feedback tool to enhance the quality of the camp experience, to understand the importance of the camp experience, and to improve camp business operations to ensure that the experience provided is being effectively communicated (ACA, 2007).

The ACA YOB is designed to have each individual survey questionnaire completed in full with all questions in that particular survey unchanged in any way (i.e. sentence structure and the phrasing of the question is not to be changed). It was found that the particular combination of each question in each of the topic category areas were



the best predictors for that particular outcome (ACA, 2007). The ACA does however allow one modification to the YOB, which is allowing the specific word ‘camp’ to be altered to fit an organizations’ specific needs.

The survey format was modified from the American Camp Association Youth Outcomes Battery (YOB) to fit the conservation corps model (i.e., the word “camp” was replaced with “YCC,” which is consistent with ACA guidelines). The survey included four scales: (1) independence, (2) responsibility, (3) teamwork, and (4) affinity for nature, totaling 64-items (32 two-part pre/post questions) (ACA, 2007) measured on a 6-point Likert scale.

Each question had two parts. The first part pertained to how the participant felt at the moment they were completing the survey. The second part, which appeared immediately below the first part, asked subjects to think about themselves before their experience in the conservation corps and respond to how they believe they felt at that time. A sample item from the survey is displayed in Table 1.

Table 1

*Sample Question – Affinity for Nature Scale*

I enjoy being outdoors.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More

A statement such as, “I enjoy being outdoors” was asked of participants which they ranked on a 6-point Likert scale, how true or false the statement reflected how they felt that day. The second part then asked participants, “Is this statement more or less true than before your YCC experience?” Participants ranked, again on a 6-point Likert scale, A Lot

Less (true) to A Lot More (true) to reflect how the experience had impacted them throughout their time spent serving in the YCC. Reference Appendix B for the complete survey.

Throughout the last three weeks of their service term twenty-one in-depth interviews were conducted by the researcher to further explore the impact that the experience had on participants. Participants were purposefully selected to attain a diversity of responses to reflect a wide array of experiences. Interviews were voice recorded utilizing a digital voice recorder, which permitted the researcher to transcribe all interviews once they were complete. The interview was semi-structured, with the researcher having prepared a list of questions to guide the interview (See Appendix C). Participants were encouraged to speak for as long as they wished regarding their conservation corps experience with no limitations put on the length of the interview. Interview questions were structured to further enhance data that were collected by the survey and inquire about specific issues of concern to the cooperating organization.

### ***Program (Treatment)***

Conservation corps operate throughout the United States providing young adults with an opportunity to learn lifelong skills, build lasting relationships with peers, and complete high priority conservation work on public lands. Conservation crews address critical public needs such as watershed restoration, trail maintenance and construction, fuels reduction, invasive species removal, and historic preservation work. Through this work with various state, federal, and non-profit organizations, conservation corps are able to deliver their program with opportunities lasting anywhere from four weeks to ten

months. It is during this time frame that crew members are exposed to a variety of guiding principles and rules that the organization has set forth in order to foster their growth and aid in their development.

Crew members completed an application to work for a conservation corps just like any other job. Recruitment for the summer conservation corps experience has an open enrollment period in which applications for crew members are accepted year round with most of the experience being completed between the months of June and August. Typically crew members find out about various conservation corps through online searches, word of mouth, or active recruitment by the organization's headquarters staff. Interviews for crew member positions are typically completed via telephone between the months of February to May, although some interviews are completed in person if the interviewee and the interviewer are able to make arrangement. Interviews typically last approximately thirty minutes wherein a variety of topics are discussed ranging from rules, group living situations, and the type of work to be completed. Once individuals are hired, they receive an informational packet containing necessary paperwork such as rules for the conservation corps, important dates, and remuneration information.

Upon arrival on the orientation day, all crew members met with their supervisors and fellow crew members where they received more information regarding their upcoming summer such as the project(s) they would be working on. Ice breaker games were completed to build an early sense of community and to help individuals become more comfortable with one another. Crews then proceeded to travel to their camp sites where they would be staying for the duration of their project. Lodging varied for each crew from four-person tents that housed two crew members each or open lean-to's, both

units separated by gender. Some camping locations were in an established campground that provided such amenities as running water, flushing toilets, and showering facilities. Other sites were more primitive with no established camping areas, where water had to be acquired from nearby sources and treated with water filtration systems, latrines dug, and showers were available once a week in a nearby town.

Each crew developed their own method for dividing up the necessary chores that had to be completed in the camp to make it run effectively and efficiently. Typical camp chores included securing the crew's food from animals, gathering water, and washing dishes. Additional roles that existed to serve the greater good of the crew included a 'Leader of the Day' in which additional leadership responsibility was given to a designated participant, an 'Educator of the Day' in which important lessons would be taught each day, and cooks to prepare the meals in which the crew ate communally. Roles rotated to ensure that all members were provided an opportunity in which to experience each role at least one time per week.

Crews worked five days a week for forty hours with days typically beginning at 6:00am with the Leader of the Day ensuring that all individuals were awake and cooks preparing the morning meal. Lunches were packed and the crew traveled to their worksite, whether it be hiking if the site was nearby or driving, to begin work at 8:00am. The crew supervisors would establish the day's goals and communicate what needed to be accomplished for the day. The Leader of the Day would inventory the tools that would be used and be held accountable for their safe return at the conclusion of the work day. After lunch was taken the educational aspect of the program was completed which consisted of an hour long session built into the workday, pre-established with the project

sponsor in which the crew are tasked with reading current events with the intention of provoking stimulating discussion amongst the group in a safe, controlled atmosphere.

Work days typically ended around 4:30pm with the Leader of the Day inventorying the tools once more before they were put away for the evening in secure storage. The crew then traveled back the lodging site and after-work chores began including acquiring potable water, dinner preparation and cooking, and when applicable; preparing the evening's educational lesson. For those who did not have assigned chores this was time to shower (if available), reflect in their journals, read, or just relax. After the evening meal was complete and all other camp chores were taken care of, the crews would either debrief their day or simply spend more time getting to know each other. Crew members were encouraged to be in their sleeping bags with lights out at 10:00pm.

Training of crew members was completed on the job site, facilitated by the crew supervisors who previously had comprehensive training one-month before the crew members arrived. Projects varied depending on the needs of the sponsor and the scope of the project. Sponsors include federal, state, local, and non-profit agencies with projects varying anywhere from mountain bike trails, maintenance on existing trails, watershed restoration, and/or invasive species removal. Work was completed in all types of weather in the outdoors including rain, wind, and varying temperature fluctuations.

Sessions of this particular experience lasted four to seven weeks and included crew members in both residential and non-residential settings. Residential crew members lived in close proximity with each other for the term of the service while non-residential crew members went back to a primary residence for the evening and weekends, only spending time with the crew during regular work hours.

### *Collection of the Data*

Survey data were collected by the crew supervisor working on-site with participants on a daily basis. A thirty-minute presentation was given by the researcher as part of the one-month long mandatory training for crew supervisors before the crew members began their service term. Crew supervisors were instructed in administering the survey to their crews upon completion of the experience. Copies of the actual survey packets were handed out to crew supervisors for them to examine. Contents of the packets included 10 surveys (Appendix B), 10 pens, and the Survey Conditions Sheet (Appendix D) that was to be filled out by the crew supervisors to take into account any crew specific limitations that may exist (e.g. inclement weather, crew morale, project status, etc.). On the outside of the packet the crew name was written on the front with permanent marker and a checklist detailing what necessary objectives needed to be completed before the packet was turned in was affixed on the back (Appendix E).

With approximately one-week remaining in the season, the cooperating organization's headquarters staff delivered the prepared survey packets to all seventeen teams in field at that time with a regularly scheduled mail delivery. Upon receiving the packets, crew supervisors were instructed to administer the surveys to their team at the next earliest possible date. Approval was given to the researcher from the cooperating organization to have the survey administered during the crews next scheduled educational hour to allow participants adequate time in which to complete the survey. Crew supervisors were instructed to read aloud the survey instructions to the entire crew before they were permitted to complete the survey (Appendix F). All documents were approved

by the State University of New York College at Cortland Institutional Review Board (IRB) in May of 2012 (Appendix G).

Upon completion of the surveys, crew supervisors were asked to seal the contents of the envelope and retain the packet until they arrived back at the organization's headquarters at the conclusion of their season. Packets were turned in along with other regular closeout paperwork necessary for the program. At no time were any headquarters staff of the cooperating organization to examine or open the contents of the packets ensuring complete anonymity of the participants. Once all the packets were returned to the headquarters, the researcher retrieved the packets for data entry and analysis.

With one to three weeks remaining in the program, the researcher purposefully selected twenty-one individuals from amongst the 109 participants in the field at that time. The crew supervisors were contacted and instructed to ask the identified crew member if they would be willing to participate in an interview about their experience. Once the crew member agreed, an interview date was established. On that date, the researcher traveled to the crews' work site and took each selected participant aside from the rest of the crew to conduct the interview. Prior to the interview beginning the researcher read aloud the informed consent statement asking the crew member if they wished to be a participant in the research. Each participant was permitted to speak for as long as they deemed necessary regarding their experience without fear of reprimand from their crew supervisors or cooperating organization. Interviews ranged from 15 minutes to 100 minutes depending upon the participant and the degree to which they were willing to share information about their experience. Upon completion, all interviews were then transcribed verbatim by the researcher to maintain confidentiality and accuracy.

## *Data Analysis*

### **Survey**

Surveys were collected from crew supervisors at the end of the season and were opened individually and named according to a predetermined numbering system that would denote the team number and the number of surveys in each packet (i.e. Survey 11 would be team 1, survey 1. Survey 26 would be team 2, survey 6, etc.). Once surveys were numbered, the data were entered into SPSS Version 20.0 and Microsoft Excel 2013. Data were screened for outliers and missing cases.

A two-way between-groups multivariate analysis of variance (MANOVA) was performed to investigate if the overall program had an impact on the four areas of interest: independence, responsibility, teamwork, and affinity for nature. Two-way analysis of variance (ANOVA) tests were completed to analyze means amongst the independent variables of time (pretest and posttest) and that of: age group (16-18 or 19-24), type of crew (4 week or 7 week), gender (male or female), and number of times served in YCC, on the four dependent variables.

### **Interviews**

Each interview was transcribed verbatim by the researcher and read several times prior to coding to gain a better understanding of the content involved (Creswell 2003, Merriam, 2009). After the content was reviewed, coding began by selecting key statements that appeared throughout each of the interviews. (Creswell, 2003; Creswell, 2007; Merriam, 2009). To enhance trustworthiness, a second researcher independently



reviewed and coded a subset of the interviews which was then compared to those created by the principle researcher and checked for consistency. Coded transcripts were reviewed again and grouped into emergent themes. Survey results were examined in relation to the qualitative interview themes to determine points of convergence and divergence.

## **Chapter 4**

### **RESULTS**

This chapter reports on the results of the data analyzed from 101 surveys collected and fifteen interviews analyzed. Surveys consisted of 32 two-part Likert scale questions utilizing the American Camp Associations Youth Outcomes Battery (YOB) scales of independence, responsibility, teamwork, and affinity for nature. Interviews were conducted following a semi-structured format wherein purposefully selected participants were asked to reflect back on their experience and assess how it impacted them. Probes, when necessary, were used to further explore areas initially addressed by the interviewee.

To enhance validity and to gain a better understanding of how the conservation corps experience impacts particular individuals a mixed-methods approach was utilized. The benefit to this approach is that it allowed the collection of diverse types of data to be collected in an attempt to best understand the research problem (Creswell, 2003). This study aimed to explore the effect participation in a Youth Conservation Corps (YCC) had on participants perceived level of independence, responsibility, teamwork, and affinity for nature. Furthermore, this study explored the impacts to participants as they described it in their own words based on their individual experience.

## ***Quantitative Survey Results***

### **Sample and Response Rate**

The sample population at the dissemination of the survey consisted of 109 crew members in seventeen separate crews, each led by two crew supervisors. Crew supervisors were not instructed to fill out the survey, rather to complete a survey conditions sheet that was to be used by the researcher to determine if any extenuating circumstances existed that could have skewed the survey results (Appendix D). Of the 109 potential participants, a total of 101 surveys were collected from sixteen teams. One team did not submit any surveys; no information or explanation was received by the researcher for the absence of the survey packet at the time of program closeout. This resulted in a 92.66% response rate for the entire sample population.

The population sample consisted of 96 individuals who identified as ‘White’, followed by four individuals who identified themselves as ‘Black or African-American’, and one individual who identified as ‘Other’ categorizing themselves as ‘Creature.’ This sample is not representative of the conservation corps network in the United States (The Corps Network, 2013), however it is an accurate representation of the population of the state in which the conservation corps is located (United States Census Bureau, 2014). Eighty-three percent of respondents indicated that this was their first season with the particular youth conservation corps, followed by 10% indicating that this was their second. Approximately 45.5% of participants indicated that they were between the ages of 16-18 years, the remainder being between the ages of 19-24. A detailed breakdown of the samples demographic information can be referenced in Table 2.

Table 2

*Sample Demographics*

Characteristic	N	Percent
<b>Gender</b>		
Male	42	41.6
Female	59	58.4
<b>Length of Session</b>		
4 weeks	20	19.8
7 weeks	81	80.2
<b>Ethnicity</b>		
White	96	95.0
Black/African-American	4	4.0
Other	1	1.0
<b>Seasons Served (this YCC)</b>		
1 (First Season)	83	82.1
2	10	9.9
3	4	4.0
4	2	2.0
6	1	1.0
Missing	1	1.0
<b>Age Range</b>		
16-18	45	44.5
19-24	56	55.5
<b>Type of Crew</b>		
Residential	64	63.4
Leadership Focus	19	18.8
Non-Residential	18	17.8

Seventeen crews were in the field at the time of the survey distribution, averaging approximately 5.94 crew members per crew. Of the 17 crews, three were identified as being seven-week-long non-residential crews, wherein crew members work with their crew Monday-Friday 7:30am-4:30pm with evenings and weekends to themselves. The remaining 14 crews were considered residential crews wherein crew members spent the duration of their session with that particular crew, cooking meals with them, working

with them, sleeping in tents with them and completing camp chores together. Of the 14 identified residential crews, two were identified as four-week crews while the remaining 12 were identified as seven-week crews. Of the 12 seven-week crews, three completed a program that was specifically designed to be leadership intensive in which crew members were challenged more in building their leadership potential through direct leadership experiences and through the completion of a leadership-specific curriculum. One of these three leadership-intensive crews intentionally consisted only of females, an initiative made possible through a specific funding source. The remaining nine crews were considered a ‘traditional’ residential crew experience with no specific curriculum focused on leadership, rather the regular educational model previously described in Chapter 3. A summary of crew types and session duration is presented in Table 3.

Table 3

*Crew Types and Duration*

Type of Crew	Four Weeks	Seven Weeks
Traditional Residential	2	9
Traditional Non-Residential		3
Leadership Intensive		2
Female-Only Leadership Intensive		1
Total	2	15

## **Analysis**

### ***Survey Conditions Sheet***

A Survey Conditions Sheet (Appendix D) was formulated and distributed along with every survey packet in order to better understand the conditions in which the survey was administered. These sheets inquired about such things as the present weather conditions, how their project was going, if members were dismissed or quit the crew recently, and overall crew morale. Ten crew supervisors indicated that crew members were given enough time to complete the survey (subsequently zero crews indicated that crew members felt rushed to complete the survey), eight crews felt tired (while only two crews felt energized), eight crews indicated that the weather was sunny (only three crews noted hot weather, while four crews indicated humid). Visits by project sponsors or supervisors from headquarters staff in the past week were noted by four crews to have made for a morale boost. Three crews indicated that they had lost crew members within the past week (fired, dismissed, asked to leave, left on own accord) which had left the crew with mixed emotions. The average overall morale of the crews as indicated by a ten point Likert scale (1 = bad, 10 = great) was 7.16. When asked how their overall project was going on the same ten point Likert scale crews responded positively with an average of 7.88.

### ***Instrumentation Validity and Reliability***

Since its inception in 2006, the ACA Youth Outcomes Battery (YOB) has been used in various formats and subsequent studies have supported the construct, discriminant, and convergent validity of the YOB (American Camp Association, 2014;

Sibthorp, Bialeschki, Morgan, & Browne, 2013; Eastep, Cachelin, & Sibthorp, 2011). Cronbach's alpha was calculated to verify the internal consistency within each of the four tested YOB scales (independence, responsibility, teamwork, and affinity for nature) against those findings of Eastep et al. (2011) and Sibthorp et al. (2013). Cronbach's alpha value was found to be .84 for the eight-question independence scale, .57 for the six-question responsibility scale, .64 for the eight-question teamwork scale, and .95 for the ten-question affinity for nature scale. Using George and Mallery (2003) and DeVellis (2003) guidelines concerning acceptable Cronbach's alpha values being greater than .7, it was found that two scales met this criteria (independence and affinity for nature) while two fell below this threshold (responsibility and teamwork). While the Cronbach's alpha for the affinity for nature scale is congruent with the findings of Eastep et al. (2011) and Sibthorp et al. (2013) which was found at .93, the remaining three scales were below those reported by Sibthorp et al. (2013) (responsibility: .92, independence: .92, teamwork: .94). This difference can possibly be attributed to the age demographic of the sample population being above that of what the ACA scales were initially designed for. While the ACA scales were developed for campers ages 10-17, the make-up of the sample population for this study consisted of participants ages 16-24. The items were retained as the ACA allows use of the YOB, provided the questions are not eliminated, and therefore the findings may be interpreted with some caution.

### ***Statistical Tests***

To investigate if the overall program had an impact on the four areas of interest (independence, responsibility, teamwork, and affinity for nature) a two-way between-groups multivariate analysis of variance (MANOVA) was performed using SPSS

Statistics software Version 20.0. To test for multivariate normality within the four dependent variables (independence, responsibility, teamwork, and affinity for nature), a regression analysis was used to calculate Mahalanobis distances. The data concluded the presence of three cases that were above the accepted critical value of 18.47 (Pallant, 2010, p. 288) as multivariate outliers (Survey 91 pretest: 29.63, Survey 31 pretest: 29.50, and Survey 142 posttest: 24.646). Although these cases were outside the acceptable standards for the appropriated critical value, they represented only a small percentage of the sample (1.49% of the combined N for pretest and posttest) and were retained as there was no theoretical reason to remove them. MANOVA revealed a statistically significant difference between the pretest and the posttest on all four dependent variables. Full results can be seen in Table 4.

To reduce the probability of encountering a Type I error, a Bonferroni adjustment was calculated to be .0125 ( $\alpha = .05/4$ ), and used to investigate a further relationship between each of the dependent variables when considered separately. Taking into account this new, adjusted significance level, all four of the dependent variables (independence, responsibility, teamwork, and affinity for nature) demonstrated statistical significance as seen in Table 4.

The results were further confirmed by examining the eta squared statistic for each dependent variable. Utilizing Cohen's (1988) guidelines for interpreting values: .01=small effect, .06=moderate effect, .14=large effect (pp. 284-287). All four dependent variables (independence, responsibility, teamwork, and affinity for nature) demonstrated a large effect size as can be seen in Table 4.



Table 4

*MANOVA Pretest & Posttest Means and Gains by Scale*

YOB Scale	N	Pretest		Posttest		Gain	F	sig	eta squared
		Mean	SD	Mean	SD				
Responsibility	101	4.44	0.59	5.57	0.35	1.13	274.72	0.00*	0.58
Teamwork	101	4.86	0.60	5.43	0.41	0.57	62.29	0.00*	0.24
Independence	101	4.27	0.62	5.54	0.57	1.27	227.16	0.00*	0.53
Affinity for Nature	101	4.50	0.84	5.49	0.83	0.99	71.24	0.00*	0.26

\*statistical significance at  $p < .0125$

To explore if there was an interaction effect between pretest and posttest results and that of a number of gathered categorical, independent variables (i.e. gender, crew type, session length, age group, seasons) and that of the continuous, dependent variables (independence, responsibility, teamwork, and affinity for nature) a two-way between-groups analysis of variance (ANOVA) was conducted between each of the mentioned variables. The only two statistically significant findings were noted for age and crew length on the independence scale.

Participants were divided in two separate age groups, 16-18 and 19-24, consistent with how they are typically separated in their individual crews (as per the cooperating organizations preference). Findings indicated a statistically significant ( $p < .05$ ) interaction effect between age group and time (pretest and posttest) on independence, with older crew members (19-24) reporting greater gains in independence than younger crew members. Means and change scores are shown in Table 5.

Table 5

*Gains for Age Group in Independence Scale*

Age Group	N	Pretest		Posttest		Gain
		Mean	SD	Mean	SD	
16-18	45	4.34	0.62	5.38	0.64	1.04
19-24	56	4.22	0.62	5.66	0.48	1.44

p < .05

During the hiring process, participants indicated whether they preferred to serve on a four-week or a seven-week crew. Prior to their arrival at the organization's headquarters, participants were selected to be on either a four-week or a seven-week crew. Those who served for seven-weeks demonstrated statistically significant gains in levels of independence over those participants who served on a four-week crew. According to Cohen (1988), this effect was small (.023) though statistically significant ( $p < .05$ ). Means and change scores can be seen in Table 6.

Table 6

*Gains for Crew Length in Independence Scale*

Crew Length	N	Pretest		Posttest		Gain
		Mean	SD	Mean	SD	
Four-week	20	4.41	0.59	5.51	0.75	1.10
Seven-week	81	4.24	0.62	5.59	0.51	1.35

p < .05

The data demonstrate that participants who served on seven-week crews had a greater sense of independence at the conclusion of their time at the YCC than those participants on a four-week crew.

Analysis of the data demonstrated that all participants reported a significant increase in areas of independence, responsibility, teamwork, and affinity for nature as it

relates to the program's overall effectiveness to deliver the treatment. Further investigation revealed that older participants felt a greater sense of independence than that of younger participants and, participants on seven-week crews reported a greater sense of independence than those who served on a four-week crew.

### ***Survey Additional Comments***

Space on the final page of the survey allowed participants to add any additional comments that they felt would be helpful feedback for the researcher or cooperating organization. Forty-five surveys with recorded comments were received. Three major themes became apparent as categorized and defined by the researcher. These themes were: *Survey Specific*, *Organization Specific* and *Life Post YCC*.

The most prevalent statement displayed in all of the recorded surveys fell under the Survey Specific theme. It was noted that the survey did not allow for a "No Change" or "Neutral" option with 18 comments of varying degree detailing that the survey was biased towards the organization (and therefore researcher), allowing credit to be given when none was due and not giving enough credit when it was due. Other comments regarding the survey stated that two individuals found the survey difficult to understand while two others saw no value behind repetitious questions that were in the survey.

Regarding Organization Specific comments, eleven comments stated that participants felt restricted by the rules that were in place within the organization and that they felt that the rules should be age specific or crew-type specific. Three individuals requested that more time be spent preparing individuals for life in the YCC, while five stated that they enjoyed the overall experience.

Four comments stated that their experience gave them perspective beyond the YCC and that they will realize the impact that this experience had on them in their time away from the corps. Two comments stated that they learned new skills that they will take with them while one comment stated that their environmental aspect was broadened through serving in the YCC.

### ***Qualitative Interview Results***

#### **Sample**

Twenty-one interviews were conducted by the researcher lasting between 10 minutes and 100 minutes. Ten male participants and eleven female participants were interviewed ranging in age from 16-24 years of age and were representative of the sample population of the cooperating agency. The researcher was provided a master list of all crew members in the field at that time and upon reviewing the list selected twenty-one participants based on their age, gender, type of crew they served on and number of seasons served with the particular YCC. Participants were then asked, via their crew supervisor, if they wished to participate in the interview process. Once confirmed, the researcher then traveled to the location where the crew was located and conducted the interviews. Interviews were conducted at the participant's job site or camp with the full support of the crew supervisors and cooperating organization. Participants were excused from their present work duties with no limitation on how long they could be absent from the work site to speak to the researcher freely about their experience.

Of the twenty-one interviews conducted, fifteen were selected for further analysis. The six interviews that were removed from further analysis were eliminated due to

unresponsive participants (three interviews) and reaching saturation (remaining 3 interviews). Among the fifteen valid interview participants, two (one male, one female) served in a non-residential crew setting in which the participants would show up each morning Monday through Friday, at a pre-determined location and ride as a team together to the job site each day. Three participants (two male, one female) were interviewed that participated on a co-educational leadership intensive residential crew. This crew, along with the female only leadership intensive crew, differentiated themselves from other crews in that participants were placed in a direct leadership role early on in their experience receiving minimal support from their crew supervisors. All participants had an opportunity to serve as the Leader of the Day in which they had all the responsibilities that the crew supervisors had in guiding day to day operations on the job site and making decisions that directly affected the crew. Furthermore, a leadership-driven curriculum was completed each day as part of an educational aspect of the program that presented participants with leadership challenges and stimulated conversation amongst the team in handling situations that could arise while in a leadership role.

Additionally, two female participants were interviewed who served on an all-female leadership-intensive residential crew. Participants on this crew ranged in age from 20-24 who elected or were assigned to serve on an all-female crew that had all the aspects of the co-ed leadership intensive crew but with a greater concentration on promoting female empowerment.

The remaining eight participants interviewed served on the most common type of crew, which was a co-educational, residential crew where individuals lived, ate, and

worked in proximity of one another for the seven week period. Graphical breakdown of the participants can be seen in Table 7.

Table 7

<i>Interview Population</i>		
Type of Crew	Gender	
	Male	Female
Traditional Residential	4	4
Traditional Non-Residential	1	1
Leadership Intensive	2	1
Female-Only Leadership Intensive		2
TOTAL	7	8

### **Interview Findings**

Once the interviews were transcribed verbatim, they were coded using open analysis by the researcher to determine like themes. A second researcher independently coded a subset of the interviews to increase validity. Interview analysis revealed three primary themes: (1) Community, (2) Empowerment, and (3) Skill Development. These three themes were further divided into several sub-themes described below.

#### ***Theme 1: Community***

Residential and non-residential participants reported a strong sense of community develop after working, and for the residential crew, living together for seven weeks. By placing the participants in a situation where they have to work together with other

individuals to accomplish challenging and sometimes arduous work in the outdoors, participants expressed feelings of understanding and sympathy amongst members of the crew. Some participants realized that if they were having a challenging day regarding the work or weather, it was likely another member of the crew was feeling something similar. This sense of a shared experience, allowed participants to cope with the hardships of the program and develop strong relationships from this challenge, bringing together diverse individuals that did not know one another prior to their YCC experience.

### **Sub-Theme 1: Relationships**

The conservation corps experience provided individuals with an opportunity to live, eat, sleep, work, and sweat alongside other individuals who shared similar interests as they do. Participants who were interviewed foresaw themselves keeping in touch with other individuals they worked with once their experience was complete. The availability of social networking sites and other modern technology (i.e. cell phones, e-mail) make it easier for participants to remain in contact with one another after the summer concludes.

One participant described his experience as:

“I’ve laughed, I’ve gotten dirty, I’ve lost more than just weight and I’ve gained more than just a paycheck.” I think that is how I view this entire thing. There’s been a lot of really good stuff to come out of this. I’m happy that I’ve gotten to share it with these people. I don’t really care if my work doesn’t stay, just as long as my relationships do. (male participant, age 21)

YCC participants are eligible to serve multiple terms as long as they are within the age requirements of the program, which typically is between the ages of 16-24. Of the fifteen participants interviewed, two had served previously in the same YCC program - one male, one female. Returning participants often struggled to find their place in the

team as they were comparing their previous experience and how it differed from their present situation (e.g. rules that changed, prior friendships formed, crew supervisor leadership style). Returning members had a frame of reference of what their previous experience was and what they felt their present experience should be. In both interviews with returning participants, they reminisced of how their present experience had fallen short of their previous season(s). Such sentiments were absent from first time participants.

Although participants served on a crew for seven weeks, the close proximity in which they lived and worked with one another encouraged them to make the most of the situation that they were in. Knowing that other members in the group were going through the same shared experience, such as having the same food again for breakfast every morning or being tired and working in the rain, helped many deal with the everyday stresses of the job and complete the experience. All members reported finding their place on the team and building relationships that were centered on the greater conservation corps experience. One participant recalled her most memorable moment from the season:

So I think the best thing is when we get to have dinner and hang out and getting to know everybody has been really special. I think that you don't really get an opportunity to know people this well, this quickly, if you're not eating, living, working and sleeping with all these same people, all the time. I see these people 24 hours a day and I wouldn't have gotten to know them this well if it was a job where I got to go home every night and go to bed. This has been really cool I think. The people definitely make it.  
(female participant, age 19)

## **Sub-Theme 2: Teamwork**

Aspects of teamwork were strongly represented in all interviews. All teams consisted of four to six crew members that were roughly divided into two age brackets,



16-18 and 19-24. Daily tasks were assigned by either the crew supervisors or by the peer leader (Leader of the Day). Typically crews divided camp chores amongst the team members including cooking, washing dishes and gathering water. Participants described situations revolving largely around the work being completed such as:

I thought that it was really cool that we were able to move a 600-700 pound stone with three people. And there's so much amazement about how we can move all that with such little effort. We still had energy to go get another rock afterwards. (male participant, age 17)

Other participants detailed the importance of communicating with one another, giving and receiving constant feedback, focusing intently on the task at hand as one 16 year-old male participant described, "There was so much interaction with each other and we were still working at the same time and we had to focus on how the rock was moving and it was a lot of syncing." The value of teamwork and working effectively together while maintaining clear lines of communication were deemed essential to success as one 23 year-old female described:

Before this I wouldn't have been able to do this. I would have literally just injured me somehow. I've always known the importance of communication but really, I've gained the skill of really being able to be in the moment and not be super distracted.

Participants were able to better understand their own strengths and limitations as well as the strength and limitations of other members of the team. One 17 year-old female participant described her situation working with a particular member on her crew as being one of, "friendly competition of who could dig the hole faster or nail the most boards in place." She concluded by saying that her greatest experience was getting to know and work with this other member on the crew just due to his creativity in making the work fun and enjoyable.

### **Sub-Theme 3: Social Support**

The importance of having other individuals sharing the same experience was an important part of the conservation corps experience expressed by participants. This finding is further supported by Ryan, Kaplan, and Grese (2001). Remaining positive in light of whatever challenging situation presented itself and keeping in mind the overall morale of the group was described by one female participant:

I mean I've done group things before but I'm not necessarily the type of person to be like 'Yeaaa teamwork, community all over the place every single second of the day!' But now that I've done it, I see the importance of it and keeping the positive attitude. I'm not necessarily the most positive person, but I am here because I understand how important it is for everyone else. (age 23)

Conservation corps typically take individuals away from their traditional group of friends and place them in a situation with complete strangers. Some participants felt as though they were able to 'start new' with an unfamiliar group of people, and re-create themselves differently. One 19 year-old male participant on a leadership-intensive crew noticed of his fellow crew members that, "certain people were more willing to open up due to the atmosphere that was created on this crew." Crew members were more receptive towards one another and more likely to voice their opinion about a particular subject matter that they felt strongly about. This only happened however, after the team had been together for a period of time and a relationship of trust had been developed on the team. Some participants speculated that they would be more likely to voice their opinion outside of the YCC experience once their service term was completed thanks in large part to the supportive environment of their crew experience that first allowed them to feel empowered to do so.

#### **Sub-Theme 4: Diversity**

The ability of conservation corps to bring people together of varying backgrounds, from differing social strata and upbringings permits the participants to experience people who may be different from them in a comfortable, safe setting.

It's definitely helped me put a lot of things into perspective as far as life goes. Just relationships too, I feel like I'm going to be a lot more patient and understanding with people after leaving. That's the really good thing about YCC, is that you're living with people that you wouldn't normally live with and you just really experience so many different perspectives, it changes the way that I see everything. (male participant, age 17)

Participants' ability to handle challenging situations and dealing with individuals of different backgrounds are further increased after serving in a group intensive situation supports the findings of Gallini and Moely (2003), Astin and Sax (1998), Mainella (2002) and McKenna and Rizzo (1999). Some participants found that living and working with people with different values and habits than themselves to be challenging and something that had to be overcome throughout the session as one 20 year-old residential female crew member described:

That's been really challenging due to those people being people that I would probably never associate with in my normal life. Not that I wouldn't by choice, but I would never be in the situation like this. Here you are forced to be friends with, live with, and work with the same eight people.

Differences existed in how the residential crew members and non-residential crew members solved conflict issues. Residential crew members are in one another's presence every day for the duration of the term of service. Therefore, conflict must be confronted and resolved or it can escalate to a point where tensions rise to the point of unproductivity and hostility. One non-residential crew member stated her challenges with some individuals on the crew and how she solved the situation:

I love all these people I work with. They're amazing, but I could not live with them. There are some people who I could, but at the end of the day we're practically at each other's throats. I'm the type of person where I can get away from them, I'm fine and it'll be good. But if I had to stay with them overnight and then see them the next morning, it would not be good. I would want a break from it. (female participant, age 16)

Non-residential crew members had the opportunity of avoiding the problem since they were only in the presence of one another for the duration of the work day. They were able to go to their personal residences at night and on the weekends and could let tensions diffuse. Residential crew member, however, are usually forced to resolve conflict due to the close proximity in which they lived and worked with one another for the duration of their service. Resolution was accomplished on their own or with the support and guidance of their crew supervisors.

### ***Theme 2: Empowerment***

Perhaps the most prevalent theme found during the interview process was one of empowerment and tremendous accomplishment. Participants reflected back on how challenging the experience was in the beginning, but then realized the confidence that came about after completing a project and viewing their work. Female participants in the female only leadership intensive crew referenced this idea of empowerment more than females in co-educational teams. In female only crews, participants were expected to accomplish the tasks that might otherwise be passed off to male participants (e.g. heavy lifting). One participant described her thoughts on being on an all-female leadership intensive crew as:

It's cool to learn how to use your body in a more physical way with a group of women. I think that we've had discussion about what it would be like if there were guys. Having the guys take on the more difficult tasks of carrying heavy things or having a feeling like guys would step-up and be like 'No we can do that, because we're more physically strong up top or something like that.' Even if that weren't the case in the moment, it's still our perception of not having that block of having men that might be more dominating in a group where there is physical labor. Just sort of learning how to do things on our own. (female participant, age 20)

### **Sub-Theme 1: Independence**

As the program was structured, residential crew members demonstrated high levels of independence as they were placed in a situation in which they were forced to be away from their families and close friends, pushing them further outside their comfort zone. Residential crew members were challenged to resolve their differences with others as they arose, whether it was with the help of the supervisors or peers. As one 17 year-old male participant described his observations about individuals on his residential crew:

This isn't for everyone and how demanding it can be. Even if the work isn't as demanding, just the demanding being away from your everyday life and being away from everyone. How demanding and how taxing it can be. There's a lot of unpredictable situations you get thrown into.

Individuals on both residential and non-residential crews reflected on the level of independence and creativity that their crew supervisors provided them in order to bolster their confidence and challenge them to make decisions on their own with limited supervision. As an 18 year-old female participant described, her crew supervisors gave her team enough room to think outside the box and learn from mistakes that were made by doing the work over again. She realized, "that is how it should be, if you make a mistake you should be the one that has to go back and fix it, it's the only way that you will learn is from your failures."

### **Sub-Theme 2: Confidence**

Supporting the findings of Perry, et al. (1999) and Yamaguchi, et al. (2008), participants showed an increase in confidence as the program progressed. Challenging situations that arose in the first few days were reflected back upon later in the session and seen as less of an issue near the completion of the program. A large number of participants described situations in the beginning of their service term regarding the work and their own ability to complete the work.

I didn't think that it was going to be this hard when I first started. But I kind of liked the challenge. I mean I think that everyone should at least try this. Its character building and I wouldn't change anything about it. I mean this is really fun and this is a job, it's not some camp so you're going to have hard parts. (female participant, age 16)

Participants stated that this was an intense experience unlike any other that they previously had. Residential members were so involved in the intense experience that they forgot what life was like outside of the YCC and did not fully realize themselves that they had changed. It often took a close friend or family member to notice a change in the participant. During an 'open house' showcasing where family members and friends are invited to see the work that crew members had been working on, one 19 year old participant stated that his mom and family, 'noticed a change in how he carried himself now, as if more sure of himself and an increase in confidence.' He further forecasted that it would take a few more months, but he would continue to see an improvement in himself due to his experience in the youth conservation corps.

### **Sub-Theme 3: Accomplishment**

A tremendous benefit of serving in a conservation corps is that participants are able to directly see the fruits of their labor. Participants took a tremendous amount of

pride in the work that they completed, often times taking ownership of a particular task where they were the project manager. The opportunity to claim a project as ‘your own’ ranked highly amongst the participants interviewed. Although all cited having received key assistance from other crew members as imperative to the success of the project, having the opportunity to see a project from start to finish and finely honing a particular skill gave individual participants significant pride in their work and was further enhanced when they received an opportunity to describe the process to another individual. One participant in an all-female crew described a situation that she was particularly proud of involving a rather large rock and other members of her crew.

There were four of us on the rock trying to move it. We said so many times that we might need to give up on this, we just need to give up and call it a day and realize that it can’t happen. We were at that point for a while, before we just realized, to just do it and get as far as it could go. It went from all of us saying ‘This isn’t going to work, this rock is just way too large and we’re putting too much time and effort into moving it’, to getting it to its place that it needed to be. That, definitely in the end I felt like I could really do anything.  
(female participant, age 23)

Participants also cited acknowledgement by the public as another way in which they felt accomplished. Being able to see and interact directly with people that were going to be utilizing their trail ranked high on proud moments as did being able to showcase their work to their family members during an ‘open house’ session. Receiving praise and sharing knowledge about the project with family, friends, and the general public permitted participants to demonstrate their competence on the task that they completed and allowed them to take ownership and pride in their work.

Supporting the findings of Bremer and Graeff (2007), participants stated that one of the most demoralizing parts of the work related to the scope of their project and their feelings that the work that they completed did not have value. This was resolved when

project sponsors would visit the worksite that the YCC crew was working on and provide further insight as to why the project was being completed and who benefited directly from their work. Eight of the interview participants cited incidents where their project sponsor or an individual from the sponsoring agency visited the job site and showed appreciation for the work being completed through compliments or gifts (e.g. t-shirts, ice cream, cold beverage). By showing direct interest and gratitude towards the participants, project sponsors were able to reinforce that the work being completed was meaningful and increased participants satisfaction in completing environmental projects further confirming Ryan, Kaplan, and Grese (2001) and Bruyere and Rappe (2007) findings.

### ***Theme 3: Skills***

Participants described a number of valuable life skills that they obtained while serving in the youth conservation corps. Due to the opportunities that exist in conservation corps work, participants are often placed in direct leadership roles, which for many may be their first time in such a role. One participant described his first leadership experience as:

Being told that I was going to be the one who had to make the decisions on a daily basis for whatever length of time was very, very challenging. Especially when I felt like I didn't know what I was supposed to do and would ask the crew leaders and they would tell me to just use my wits. You know? That's a really big challenge. Really, big challenge for me.  
(male participant, age 19)

These leadership positions challenged participants to think critically and solve problems on their own with limited guidance from a mentor. Skills that they learned and improved upon during their time in the youth conservation corps, participants are able to take with them and utilize throughout their lives (Prouty, 2009).



Supporting the findings of Yamaguchi, et al. (2008), participants cited that having project sponsors and working professionals in environmental fields come to their job site and speak about their professional job status as extremely beneficial. Of the fifteen participants interviewed twelve mentioned some sort of outdoor recreational interest and of those twelve, six were college-bound, in college or had graduated from college with a degree in an environmental related field. The opportunity of conservation corps to expose participants to potential careers in environmental stewardship is present and should be fostered to bring in the next generation of environmental conservationists verifying Sagawa's (2007), DOI (2010), and DOI (2011) similar findings.

### **Sub-Theme 1: Leadership**

Participants had a minimum of two leadership opportunities and as many as eight leadership opportunities available to them throughout the duration of their season. Leadership responsibilities varied from crew to crew depending on whether it was a leadership intensive crew and the crew supervisors in charge of each crew. It was at the discretion of the crew supervisors how many leadership responsibilities they chose to impart on the participants and the degree to which individual leadership developed varied from each crew. Leadership roles consisted of being in a position of leadership from one day to up to one week at a time. In some instances participants were paired and put in a co-leadership role where they were challenged to lead alongside a peer who might have a different leadership style than their own. All interviewed participants struggled with their first leadership opportunity as they were unsure of what had to be done and how best to go about doing it. One 18 year old male was extremely hesitant to take charge on his first

leadership opportunity. He stated that through the support of his crew supervisors and the understanding of his fellow crew members he was able to succeed by asking many questions and learning from his mistakes. When it came time for his next leadership opportunity he said to himself that, “You got to do this. You signed up for the program and you can do it.”

Other participants were caught off guard by the many aspects that can go into leading a group of peers on a project site.

I think it's a lot of responsibility and also power given to you at a very sudden rate and sometimes you're not ready for that, cause you have been so used to being an active follower and be like ok, let's see what that's like. It does help you take a more active/pro-active role as a crew member and also developing yourself as a leader. (male participant, age 21)

Participants on residential crews overwhelmingly stated that their leadership role lacked responsibilities and that they often did not feel challenged enough in their role as leader. Wherein participants on leadership intensive crews stated that the balance was satisfactory and responsibility was given to participants at a moderate pace, so as not to feel overwhelmed. However, participants in all crews stated that after completing their first leadership experience they had more confidence in themselves and felt more comfortable leading the crew during their second leadership opportunity that they received.

Participants who received opportunities to lead a crew for a period longer than one consecutive day found the experience to be more beneficial. These individuals were able to learn from their mistakes, receive productive feedback and put that feedback into effect the very next day. Furthermore, having an opportunity to lead for a longer consecutive period of time allowed participants to solve longer term problems that arose

on the worksite rather than just passing the issues off to the next crew member set to lead the following day.

### **Sub-Theme 2: Problem Solving**

Completing conservation trail work required individuals to think critically to solve situations that arose in the field. No two trails are exactly the same and requires of the individuals building the trail the ability to read the landscape, have a clear vision of the scope of work, and the ability to clearly communicate with everyone the plan to get the work completed.

Half way through (flipping a rock) there was this one log in the way, and there was a tree standing up and a log down we're like, 'Well how we are going to get it this way?' And the rock didn't want to go the way that we were going, so we pushed it and it went right down into the ditch. Right where we didn't want it to go. But it was difficult but we persevered afterwards and pulled it out. Took a little bit of work because it was in mud but after we got out it was alright.  
(male participant, age 17)

Participants further demonstrated levels of independence in their problem solving approaches, understanding that they are becoming adults and will need to figure out issues on their own without the assistance or guidance of adults. Participants that had leaders that challenged them by providing guidance rather than answers gained more than those that were simply told the answer to their question.

Definitely the work is challenging. That was somewhat of a challenge, a lot of trying to figure out things for yourself. I like to ask a lot of questions, 'So should I do this?' But just taking the time, step back and thinking about it yourself instead of just asking one of your crew leaders. (female participant, age 18)

### **Sub-Theme 3: Risk Assessment**

Participants noted a change in their situational awareness while serving on a YCC crew. Being responsible not only for their own safety, but also being concerned for those around them by putting the interests of the team above their own.

Being more aware of every action that you have, has either a positive or negative consequence at the end. If you're aware of what's going to happen after you do whatever you're going to do. You can kind of think about it, 'Is this going to make tomorrow's dinner messed up' or something like that. I think that's definitely important and I've gained that. (female participant, age 18)

Many of the participants gained knowledge of Leave No Trace (LNT) principles either through interaction with project sponsors, crew leaders, or LNT Master Educators coming directly to their sites to give a lesson. Participants were able to directly see the cause of their actions if they left food unattended or did not stake their own tent properly and storm came through. Participants became acutely aware of their own bodies' limitations and learned proper lifting technique along with proper tool usage. The scope of conservation work demanded that the individual be aware of their surroundings at all times, as there are many opportunities for injuries to occur. By becoming more aware of proper lifting technique, maintaining sharp tools, keeping a clean camp, and proper sanitation methods participants are able to minimize the exposure to risk when in the field (Prouty, 2009).

All at once you have to be like 'Ok, this person walking that way with this giant tool. I'll just get out of the way. Is that person going to come over and hit me if they are swinging?' You just have to be really attentive to what is going on and I don't think that I was that attentive in the past. (male participant, age 16)

These risk management lessons can be transmitted into everyday life and outdoor recreational pursuits as one participant noted of himself. This 21 year old male participant

realized that after spending the summer completing conservation work, he has become more aware of the dangers and precautions that campers, hikers, and outdoor enthusiasts need to be aware of.

***Summary:***

This chapter consisted of a presentation of the findings that were drawn from the data analysis. A mixed method approach was utilized to gain both a large demographic of general understanding of the benefits derived from serving on a YCC crew while exploring those intrinsic rewards that are often underrepresented in traditional quantitative studies. Within the limitations of this study, the quantitative data demonstrated statistically significant results in the four tested areas of: independence, responsibility, teamwork, and affinity for nature. Furthermore, qualitative themes of *Community*, *Empowerment*, and *Skills* were supported with direct quotes from participants who served in the YCC for the summer and further enhanced by scholarly articles documented in the literature review.

## **Chapter 5**

### **DISCUSSION OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS**

The purpose of this study was to examine the impact that youth conservation corps have on participants' levels of independence, responsibility, teamwork, and affinity for nature, and to use their own described experience to understand those and other impacts. To achieve these desired outcomes, a mixed methods approach was utilized to collect and analyze the data. The survey used was adapted from the American Camp Association's Youth Outcomes Battery (YOB), which included four scales: independence, responsibility, teamwork, and affinity for nature. Demographic information pertaining to age, gender, ethnicity, number of seasons previously completed, and crew type was also collected.

Fifteen interviews were analyzed by the researcher to gain a broader perspective of how participants described the experience in their own words and the benefits they believe they derived from serving in the youth conservation corps. This chapter summarizes the study by discussing the findings and conclusions presented by the data followed by limitations encountered during the study. Implications of this study's findings are also examined, concluding with recommendations in how to utilize this information.

### *Summary of Procedures*

Survey data were collected from 109 participants ages 16-24 who were pre-selected to serve in a youth conservation corps (YCC) during the summer of 2012. The survey, adapted from the American Camp Association's Youth Outcomes Battery, sought to gather information regarding changes in independence, responsibility, teamwork, and affinity for nature. The questions included a posttest and retrospective pretest gauged on a 6-point Likert type scale that asked participants to indicate how they felt a particular statement described them after they completed their YCC experience. Information regarding demographics was also collected to determine if age, gender, length of service, type of crew, or number of seasons served had any further impact on their experiences in the YCC. Crew supervisors were instructed to complete the Survey Conditions Sheet to determine if any adverse conditions existed during the survey process that could 1.) Potentially skew results, and 2.) Provide further insight to the overall 'mood' of the crew at the time of the survey's distribution. Using SPSS Version 20.0 and Microsoft Excel 2013, survey data were collated and analyzed using multivariate analysis of variance (MANOVA) to determine overall programmatic impact in the areas of interest. A two-way analysis of variance (ANOVA) was calculated to determine if other factors, such as age grouping or duration or program, had effects.

Twenty-one semi-structured interviews were conducted and 15 were analyzed (as saturation was achieved) to enhance validity of the survey results and to gain a broader understanding of how participants interpret their corps experience in their own words. Seven male participants and eight female participants who were interviewed at their job

site or camp within the last one to three weeks of the program provided valid data. Interviews were conducted, transcribed, and coded by the researcher with a further reviewing and coding of a subset of transcriptions completed by an independent researcher to enhance trustworthiness. After reviewing the participants' transcriptions several times, three distinct themes (community, empowerment, and skills) emerged, each with their own set of sub-themes within those distinct themes.

### ***Summary of Findings***

#### **Research Question 1**

*Does participation in Youth Conservation Corps (YCC) increase participants' perceived level of independence, responsibility, teamwork, and affinity for nature?*

A MANOVA test revealed a statistically significant difference between the pretest and posttest scores on the combined dependent variables (independence, responsibility, teamwork, and affinity for nature). These results demonstrate an overall significant and positive change in participants due to their participation in the youth conservation corps during a summer YCC experience.

A two-way ANOVA test was conducted to test for interactions between the four dependent variables (independence, responsibility, teamwork, and affinity for nature) and that of a number of categorical, independent variables (crew type, age group, gender, seasons served, and crew length). The test revealed statistically significant interactions between age group and independence as well as crew length and independence as it relates to the treatment of the program. Participants in the older age group (ages 19-24)



demonstrated a greater gain over that of younger participants (ages 16-18). This may be attributed to older participants' enhanced understanding of the intended outcomes of the program and their increased self-awareness of how the program has immediately impacted them.

Participants who elected to serve on a seven-week crew saw greater gains in levels of independence than those individuals who served on a four-week crew. The longer a participant was involved in the program, the greater their sense of independence became. This is consistent with findings on the effects of outdoor experiences (e.g., see Hattie, March, Neill, & Edwards, 1997). If provided opportunities to be in a leadership role for greater than one consecutive day, participants noted an increase in their ability to solve problems that spanned multiple days. This permitted them to think critically, independently, and for the ultimate end goal of the project. As the program continued in length, participants were able to gain a greater sense of independence away from their familiar, immediate support networks and learn to resolve problems on their own.

In summary, all participants reported feeling a greater sense of independence, responsibility, teamwork, and affinity for nature after serving in the youth conservation corps. Further investigation revealed that older participants felt a greater sense of independence over that of younger participants from when they first entered the program until they exited. Additionally, individuals who participated for a longer period of time (seven weeks rather than four) reported greater gains in their level of independence. The longer the program was, the greater the sense of perceived independence.

**Research Question 2**

*What interpersonal benefits do participants receive from serving in a Youth Conservation Corps?*

Upon meeting the other members in their team, participants began to feel an almost instant sense of community. The individuals whom they met on the first day of orientation shared the same experience with them for the next four to seven weeks. This placement of participants from all different backgrounds allowed for the opportunity to communicate and interact with other individuals who would be typically outside their normal group of friends. It pushed them outside of their comfort zone in an attempt to help them grow and develop, supporting the findings of Maloney (2007) and Perry, et al. (1999).

A tremendous sense of empowerment was evident in all participants as they began to see their comprehension and understanding of trail work grow throughout their session. Individuals who in the beginning of the season had a limited understanding of their own abilities saw their confidence increase when provided the opportunity to showcase their accomplishments to individuals outside of the team. Female participants who were placed on crews that consisted of all females reported tremendous growth in their confidence and empowerment as women. When faced with challenging situations that required them to assess situations critically and modify them to work within the limitations of females (e.g. moving 800 lb. rocks), these young women experienced an overwhelming feeling of success that they could accomplish anything if they worked together.

### **Research Question 3**

*What do participants consider to be the most beneficial outcomes of their Youth Conservation Corps experience?*

Participants noted a variety of skills that they attained from participating in a Youth Conservation Corps for a summer including leadership, critical thinking, and increased risk awareness. Those participants who were given an opportunity to serve in a leadership intensive program reported increased confidence in their leadership abilities, particularly if they were permitted to serve for an extended period of time (two consecutive days up to one week). Having the opportunity to lead alongside another individual (co-leaders) provided participants the opportunity to share responsibilities that can at first be daunting to take on all by yourself. It was however not without its challenges as participants, when co-leading with another peer, had to work cooperatively with another individual whose leadership style may be entirely different from their own.

Participants noted varying degrees of enhanced critical thinking skills, largely attributed to the type of crew that they participated on. Those who served in leadership intensive crews reported higher degrees of problem solving due to increased leadership opportunities and limited intervention from their supervisors. While participants on non-leadership intensive crews did note a degree of increased critical thinking skills, many confessed to being well supported by their supervisors and having a lack of overall responsibilities in their role as the Leader of the Day.

An increased risk awareness was also noted by participants as a meaningful outcome of their experience. Much of the work completed in youth conservation corps

demands acute attention to safety (e.g. flipping large rocks, using sharp tools, awareness of surroundings) and intimate situational awareness. Participants had to be aware of how their actions might be a danger to themselves and how it might affect others. This level of awareness increased with age as did the level of communication in addressing such concerns amongst participants.

Participants also shared that it would take reflecting back on this experience in the months to come to really see a change in themselves and how they benefited. One participant noted that it took his family coming to a mid-season showcasing of their project for him to realize a change in himself. As he was in the experience, evolving with his leadership style and with those around him, he perhaps did not realize that he had changed. It took someone else close in his life to point out the change that they saw in him for him to fully realize the tremendous impact that the experience had on him.

### *Conclusions*

This investigation was able to conclude, within the limitations of this study, that youth conservation corps provide a variety of benefits to the participants that choose to participate in them. Participants become more responsible for their daily actions, have greater confidence in leading a group of peers on a jobsite, and are able to successfully work together with people from varying backgrounds from their own, all while feeling a closer connection to nature. Participants were able to gain a better sense of themselves and gain valuable life skills that they will be able to take with them wherever they go next.

### *Limitations*

The study completed was limited in several ways. First, the sample population consisted of only one conservation corps, in one state, for the duration of one summer. Hence, the entire youth conservation corps network that spans all over the United States and the world is not accurately represented. Although many conservation corps share a number of similarities, such as the demographic they serve (youth ages 16-24), the location of work (outdoors), service based learning (growth and development through work), and group support (work cooperatively in teams of varying sizes), differences still exist unique to the setting. Depending on the location of the conservation corps, the work completed can vary, as can the length of the season. Corps in the western United States typically complete a great deal of chainsaw work along with new trail construction using materials such as pressure treated lumber and rebar. Corps in the southwest will concentrate more on invasive species removal and trail closures for off-highway vehicles. Corps in the eastern United States typically complete trail improvements and renovations putting in place new structures made out of on-site harvested stone. It is therefore difficult to generalize that all conservation corps complete the same work. Some demand more teamwork (moving large rocks into place) while others demand very clear communication (safely felling a dead tree with a chainsaw or lighting a prescribed burn). Although this study did not necessarily investigate all aspects of work that conservation corps can complete, certain areas of this study can be deemed applicable to these environments (e.g. communication, leadership, empowerment, and skills attained).

The age range of the ACA scales that were utilized for the quantitative survey were designed for 10-17 year old participants (Eastep et al., 2011; Sibthorp et al., 2013) while the range of this study were from 16-24 years of age. Certain questions in the ACA scales were not relevant to older participants. For example, regarding the question, “I don’t need adults to help me do things” in the independence scale, a comment was written in the margin of a 21 year-old males survey stating that “I am an adult.” However, to utilize the ACA scales that have been tested previously for reliability and validity, the scales had to be used in its entirety with no questions altered or eliminated in any way. This could also account for the alteration in the Cronbach’s alpha between what the researcher found and those findings of Eastep et al. (2011) and Sibthorp et al. (2013).

Participants all joined the same conservation corps and had similar outcomes; however, every individual crew within the specific organization had its own unique experience that was unlike any other. Any number of variables impacted what the individual took from the experience including other crew members leaving or coming to the crew, personalities within the crew, the conservation project, the project sponsor, the crew supervisors in charge of the crew, the camp in which they stayed, and the weather for the specific area which they were working in. Although the researcher attempted to take as many of these variables into consideration by creating the Survey Conditions Sheet, it is unlikely to be able to take into account all the variables that could affect a particular participant’s experience.

### *Implications*

Participants derived a wide variety of benefits from participating in a YCC for a summer. Some saw it as just a job, a way to earn extra money for the upcoming school year; for others it was a way to build their professional resume for future careers in the outdoor and conservation based field. Participation in a YCC gave these individuals an opportunity not only to accomplish these goals, but to challenge themselves and push themselves outside of their comfort zone. It provided them with a chance to lead a group of their peers on the jobsite, develop clear communication skills, and learn the value of teamwork, further supporting the findings of Hattie, Marsh, Neill, and Richards (1997). They were able to achieve these outcomes while being paid to work outdoors and learning to think critically for themselves in a supportive environment of their peers. Youth conservation corps have an opportunity to mentor these influential minds and foster the development of responsible, environmentally conscious young adults that will enter into the workforce with a variety of skills highly desirable by many employers.

The importance of having all-female crews available in the youth conservation corps environment cannot be understated. Interview results demonstrated a tremendous increase in female confidence and empowerment that was not present in other co-ed crews. It is important to note that this type of environment is not for all females as some participants noted. However, other participants who were at first skeptical of the crew design, began to change their outlook when they saw the spectacular results that could be achieved in a group of strong women. A tremendous opportunity exists for conservation

corps to provide a safe, supportive environment for females to realize their fullest potential while enhancing their confidence through meaningful leadership opportunities.

### ***Recommendations***

Further longitudinal research is needed to better understand if there is any lasting impact once participants return to their "normal" lives. Follow-up interviews 6 months to one year after the conclusion of the experience would be beneficial to comprehend the program's lasting effects and if anything needs to be adjusted to provide more value to future participants. Additionally, follow-up studies should be conducted specifically examining the benefits that participants on an all-female crew attain as compared to that of those female participants on mixed gender YCC crews. Despite the best efforts of our society today in strides towards gender equality, there still exists a division in the treatment of men versus women in certain fields of labor. The results in this study demonstrate that in the field of conservation work, which has long been and continues to be dominated by men, women do receive enhanced benefits when absent the presence of men. It would be advantageous to better understand if the findings in this study were unique to the population, or if additional funding should be provided to increase the number of opportunities made available to young women.

The addition of a neutral option could be beneficial to the survey based on feedback received from the quantitative survey; however, a new instrument would have to be developed or utilized as no modifications can be made to the ACA YOB scales. Furthermore, the selection of a new instrument that would be designed to more accurately reflect the age demographic better would be beneficial in an attempt to eliminate



questions that are irrelevant to older participants. The new instrumentation should utilize a number of open ended questions in which participants are free to explain how they specifically believed they benefited from serving in the youth conservation corps. Experiences such as these are based so much on what an individual takes from it, something that cannot be accurately represented by close ended, Likert scale type questions.

Finally, future research should be conducted with a broader population in mind if researchers are to better generalize the study results to all conservation corps across the nation. By pulling data from multiple conservation corps throughout the United States, researchers can better understand if the results reflected in this study are localized to one particular corps or represent the greater corps experience as a whole.

In summary, additional studies are necessary to determine if the impact that the participants indicated at the conclusion of their experience lasts beyond their involvement in the youth conservation corps. Studies should be conducted to examine if the benefits derived from serving on an all-female crew differ than that of females on mixed gender crews. By developing an instrument that is meant specifically for the conservation corps experience, one that has been tested for both validity and reliability, would allow future researchers to gain more targeted data that is specific to the organizations that provide these types of experiences. Utilizing this study and implementing these recommendations, it is the hope of the researcher that the participant experience can be even better understood and further enhanced in order to create a program that is not only available to everyone who wishes to participate, but one that provides the maximum amount of benefit for everyone involved.

## REFERENCES

- American Camp Association (2007). *Creating positive youth outcomes*. Martinsville, IN: American Camp Association.
- American Camp Association (2009). *Camp youth outcomes battery: Measuring developmental outcomes in youth programs*. Retrieved from [http://webportal.acacamps.org/Purchase/ProductDetail.aspx?Product\\_code=7c0481b1-d513-de11-8487-0019b9e0e8c9](http://webportal.acacamps.org/Purchase/ProductDetail.aspx?Product_code=7c0481b1-d513-de11-8487-0019b9e0e8c9)
- American Camp Association (2014). *Youth Camp Outcomes Questionnaire*. Retrieved from <http://w.find.acacamps.org/members/outcomes/statistical-information>
- Astin, A. W., & Sax, L. J. (1998). How undergraduates are affected by service participation. *Journal of College Student Development*, 39(3), 251-262.
- Bailie, P. E. (2010). From the one-hour field trip to a nature preschool: Partnering with environmental organizations. *Young Children*. July 2010, 76-82.
- Berger, J. B., & Milem, J. F. (2002). The impact of community service involvement on three measures of undergraduate self-concept. *NASPA Journal*, 40(1), 85-103.
- Bremer, S., & Graeff, P. (2007). Volunteer management in German national parks - from random action toward a volunteer program. *Human Ecology: An Interdisciplinary Journal*, 35(4), 489-496.
- Bruyere, B., & Rappe, S. (2007). Identifying the motivations of environmental volunteers. *Journal of Environmental Planning and Management*, 50(4), 503-516.
- Bushway, L. J., Dickinson, J. L., Stedman, R. C., Wagenet, L. P., & Weinstein, D. A. (2011). Benefits, motivations, and barriers related to environmental volunteerism

- for older adults: Developing a research agenda. *International Journal of Aging & Human Development*, 72(3), 189-206. doi: 10.2190/AG.72.3.b
- Chawla, L. (1998). Significant life experience revisited: A review of research on sources of environmental sensitivity. *The Journal of Environmental Education*, 29(3), 11-21. doi: 10.1080/00958969809599114
- Chirkov, V., Kim, Y., Ryan, R.M., & Kaplan, U. (2003). Differentiating autonomy from individualism and independence: A self-determination theory perspective on internalization of cultural orientations and well-being. *Journal of Personality and Social Psychology*, 84(1), 97-110. doi: 10.1037/0022-3514.84.1.97
- Cohen, J. W. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Cole, D. N. (1996). Wilderness recreation in the United States: Trends in use, users, and impacts. *International Journal of Wilderness*, 2(3), 14-18.
- Conway, M., & Ross, M. (1984). Getting what you want by revising what you had. *Journal of Personality and Social Psychology*, 47(4), 738-748. doi: 10.1037/0022-3514047040738
- Corporation for National & Community Service (2010). *The Corporation for National and Community Service: Strategic plan*. Retrieved from [http://www.nationalservice.gov/sites/default/files/documents/11\\_0203\\_cnscs\\_strategic\\_plan.pdf](http://www.nationalservice.gov/sites/default/files/documents/11_0203_cnscs_strategic_plan.pdf)
- Creswell, J. W. (2007). *Qualitative inquiry & research design: Choosing among five approaches*. Thousand Oaks, CA: Sage Publications.

Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage Publications.

Cushman, E. (1954). *Student Conservation Corps (master's thesis)*. Retrieved from [http://vq.vassar.edu/upload/1160/images/summer2005/extras/ESC\\_Vassar\\_Thesis.pdf](http://vq.vassar.edu/upload/1160/images/summer2005/extras/ESC_Vassar_Thesis.pdf)

Department of Interior. (2011). *Youth in the great outdoors*. Retrieved from <http://www.doi.gov/21csc/history/americas-great-outdoors-a-youth-agenda.cfm>

Department of Interior. (2010). *Youth in natural resources*. Retrieved from <http://www.doi.gov/budget/appropriations/2011/highlights/upload/Youth-in-Natural-Resources.pdf>

Department of Interior. (2009). *Creating a 21<sup>st</sup> century youth conservation corps*. Retrieved from <http://www.doi.gov/budget/appropriations/2010/upload/Creating-A-21st-Century-Youth-Conservation-Corps.pdf>

DeVellis, R. F. (2003). *Scale development: Theory and applications (2<sup>nd</sup> edn)*. Thousand Oaks, California: Sage.

Eastep, B., Cachelin, A., & Sibthorp, J. (2011). Affinity for nature in outdoor programming: Theoretical foundations, scale development, and importance. *Journal of Outdoor Recreation, Education, and Leadership*. 3(3), 126-136.

Ellis, G., & Sibthorp, J. (2006). Development and validation of a battery of age appropriate measures for camper outcomes. Report to the American Camp Association. University of Utah.

- Feature, H. (2007). Nature's new educational mandate: No child left inside. *Horace*, 23(3), 1-3.
- Frumkin, P., Jastrzab, J., Vaaler, M., Greeney, A., Grimm, R.T. Jr., Cramer, K., & Dietz, N. (2009). Inside national service: AmeriCorps' impact on participants. *Journal of Policy Analysis and Management*, 28(3), 394-416.
- Gallini, S. M., & Moely, B. E. (2003). Service-learning and engagement, academic challenge, and retention. *Michigan Journal of Community Service Learning*, Fall 2003, 5-14.
- George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference. 11.0 update (4th ed.)*. Boston: Allyn & Bacon.
- Goedhart, H., & Hoogstraten, J. (1992). The retrospective pretest and the role of pretest information in evaluation studies. *Psychological Reports*, 70, 699-704.
- Hattie, J., Marsh, H. W., Neill, J. T., & Richards, G. E. (1997). Adventure education and Outward Bound: Out-of-class experiences that make a lasting difference. *Review of Educational Research*, 67(1), 43-87.
- Henderson, K. A. (2012). Team building, teamwork, group work, and camps. ACA Briefing Papers Series. Retrieved from <http://www.acacamps.org/volunteers/care/carebriefings>.
- Howard, G. S., & Dailey, P. R. (1979). Response-shift bias: A source of contamination of self-report measures. *Journal of Applied Psychology*, 64, 144-150.
- Howard, G. S., Ralph, K. M., Gulanick, N. A., Maxwell, S. E., Nance, D., & Gerber, S. L. (1979). Internal validity in pretest-posttest self-report evaluations and the re-evaluation of retrospective pretests. *Applied Psychological Measurement*, 3, 1-23.

- Kals, E., Schumacher, D., & Montada, L. (1999). Emotional affinity toward nature as a motivational basis to protect nature. *Environment and Behavior*, 31(2), 178-202.  
doi: 10.1177/00139169921972056
- Larson, R., Hansen, D., & Walker, K. (2005). Everybody's gotta give: Adolescents' development of initiative within a youth program. In Mahoney, J., Larson, R., & Eccles, J. (Eds.). *Organized Activities as Contexts of Development* (pp. 159-184). Hillsdale, NJ: Erlbaum.
- Louv, R. (2007). Leave no child inside. *Orion Magazine*, 57.
- Mainella, F.P. (2002). Directors order #26: Youth programs. *National Parks Service*.  
Retrieved from <http://www.nps.gov/policy/DOrders/DO26-final.htm>
- Maloney, D. (2007). Restorative community service: Earning redemption, gaining skills, and proving worth. *Reclaiming Children and Youth*. 15(4), 214-219.
- Marks, H. M., & Jones, S. R. (2004). Community service in the transition: Shifts and continuities in participation from high school to college. *The Journal of Higher Education*, 75(3), 309-339.
- McAdam, D., & Brandt, C. (2009). Assessing the effects of voluntary youth service: The case of Teach for America. *Social Forces*, 88(2), 945-970.
- McBride, A. M., Pritzker, S., Daftary, D., & Tang, F. (2006). Youth service: A comprehensive perspective. *Journal of Community Practice*, 14(4), 71-89.
- McKenna, M. W., & Rizzo, E. (1999). Student perceptions of the "learning" in service-learning courses. In J.R. Ferrari & J.P. Chapman (Eds.), *Educating students to make a difference: Community-based service-learning* (pp.111-123). Binghamton, NY: Hayworth.

- Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. San Francisco, CA: Jossey-Bass.
- Metz, E., & Youniss, J. (2003). A demonstration that school-based required service does not deter-but heightens-volunteerism. *PS: Political Science and Politics*, 36(2), 281-286.
- National Park Service. (2011). The Civilian Conservation Corps and the National Park Service, 1933-1942: An administrative history. Retrieved from [http://www.nps.gov/history/history/online\\_books/ccc/cccl.htm](http://www.nps.gov/history/history/online_books/ccc/cccl.htm)
- Pallant, J. (2010). *SPSS survival manual: A step by step guide to data analysis using SPSS 4<sup>th</sup> edition*. New York, NY: McGraw-Hill.
- Perry, J. L., Thomson, A. M., Tschirhart, M., Mesch, D., & Lee, G. (1999). Inside a Swiss army knife: An assessment of AmeriCorps. *Journal of Public Administration Research and Theory*. 9(2), 225-250.
- Pratt, C. C., McGuigan, W. M., & Katzev, A. R. (2000). Measuring program outcomes: Using retrospective pretest methodology. *The American Journal of Evaluation*. 21(3), 341-349.
- Price, C., Williams, J., Simpson, L., Jastrzab, J., and Markovitz, C. (2011). *National evaluation of youth corps: Findings at follow-up* (Contract No.GS10F0086K and CNSHQ09A0010). Cambridge, MA: Abt Associates Inc.
- Prouty, S. T. (2009). Achieving their potential. *Reclaiming Children and Youth*. 18(1), 37-40.

- Ryan, R. L., Kaplan, R., & Grese, R. E. (2001). Predicting volunteer commitment in environmental stewardship programmes. *Journal of Environmental Planning and Management*, 44(5), 629-648.
- Sagawa, S. (2007). Serving America: A national service agenda for the next decade. *Center for American Progress*. September 2007, Retrieved from [http://www.americanprogress.org/issues/2007/09/pdf/national\\_service.pdf](http://www.americanprogress.org/issues/2007/09/pdf/national_service.pdf)
- Sherraden, M. (2001). *Civic service: Issues, outlook, institution building* (Perspective). St. Louis: Washington University, Center for Social Development. Retrieved from <http://csd.wustl.edu/Publications/Documents/81.CivicServiceIssuesOutlook.pdf>
- Sibthorp, J., Bialeschki, D., Morgan, C., & Browne, L. (2013). Validating, norming, & utility of a youth outcomes battery for recreation programs and camps. *Journal of Leisure Research*. 45(4). 514-536.
- Stukas, A. A., Snyder, M., & Clary, E. G. (1999). The effects of “mandatory volunteerism” on intentions to volunteer. *Psychological Science*, 10, 59-64.
- Terborg, J. R., Howard, G. S., & Maxwell, S. E. (1980). Evaluating planned organizational change: a method for assessing alpha, beta and gamma change. *Academy of Management Review*, 5(1), 109-121.
- The Corps Network. (2012). About us: The Corps Network. Retrieved from <http://www.corpsnetwork.org/about>
- The Corps Network. (2014). Accreditation for Corps programs – Full accreditation standards.doc. Retrieved from <http://www.corpsnetwork.org/accreditation>



The Corps Network. (2013). 2013 Annual report. Retrieved from

[http://www.corpsnetwork.org/sites/default/images/pdfs/Resource%20Library/FY13%20Annual%20Report\\_FINAL.pdf](http://www.corpsnetwork.org/sites/default/images/pdfs/Resource%20Library/FY13%20Annual%20Report_FINAL.pdf)

The Edward M. Kennedy Serve America Act, H.R. 1388, 111<sup>th</sup> Cong., 1<sup>st</sup> Sess. (2009).

United States Census Bureau. (2014). Vermont. Retrieved from

<http://quickfacts.census.gov/qfd/states/50000.html>

Yamaguchi, R., Gordon, P., Mulvey, C., Unlu, F., Simpson, L., Jastrzab, J., . . . .

Jennings, S. (2008). *Still Serving: Measuring the Eight-Year Impact of*

*AmeriCorps on Alumni* (Contract No. ABT03T004). Cambridge, MA:

Corporation for National and Community Service, Office of Research and Policy

Development.

## **APPENDICES**

**APPENDIX A:**  
Informed Consent Letter



*Department of Recreation, Parks and Leisure Studies*

### Invitation to Participate in a Research Study on the Impacts of Conservation Corps on Youth Participants

Dear Parent/Guardian,

I have asked the Vermont Youth Conservation Corps to assist me in my data collection for my master's thesis. I am conducting a research study to further investigate the impacts of conservation corps on youth participants. The staff and crew leaders of the Vermont Youth Conservation Corps believe that the results provided will help gain valuable insight into the effectiveness of their program and help ensure that they are providing the highest quality experience for your child.

Your child will be asked to complete a "Youth Outcomes Survey" developed by the American Camp Association. Participants will be asked to complete a survey towards the end of their experience asking them to reflect back on their time in the Vermont Youth Conservation Corps. Your child may also be asked to participate in an in-depth interview asking them more about their VYCC experience. The survey and interviews seek to gain information regarding changes in independence, teamwork, environmental awareness and responsibility.

The risks of participating in the study are minimal. The survey asks participants to see how well various statements (e.g., "I can be a team-player in a small group") describe them. This survey has been widely used in summer camps across the country and has been adapted to fit the conservation corps model. As mentioned, it was developed by the American Camp Association, a community of camp professionals who use their knowledge and experience to ensure high quality camp programs. More information about the American Camp Association can be found at [www.acacanms.org](http://www.acacanms.org). The survey will take approximately 30 minutes to complete and will be administered by Vermont Youth Conservation Corps staff and crew leaders.

No names or personal identifying information will be necessary to participate in the study. The individual survey forms will be anonymous and interviews will remain strictly confidential. The completed surveys will be stored in a locked file in the SUNY Cortland Recreation, Parks and Leisure Studies Department. Results of the survey and interviews will be presented in grouped form, which will further protect the anonymity of your child's responses.

Your child's participation is completely voluntary. Your child may decline to participate at any time without consequences. If you would rather not have your child participate in the study please check the box below and we will ensure that they will not be administered a survey.

☐ I would rather my child not participate in the study. Name of child: \_\_\_\_\_

While completing this study, I am under the supervision of Dr. Amy Shellman, a professor in the Recreation, Parks and Leisure Studies Department at the State University of New York College at Cortland. If you have any questions concerning this survey, she may be reached at (607) 753-4263 or at [amy.shellman@cortland.edu](mailto:amy.shellman@cortland.edu). The study has been approved by the Institutional Review Board at SUNY Cortland. Should any questions arise about the rights of your child regarding participation in the study, or any questions or concerns about research in general, please contact the Institutional Review Board at (607) 753-2511, 402 Miller Building, P.O. Box 2000 Cortland, New York 13045.

We greatly appreciate your child's participation in the survey and helping to ensure that the Vermont Youth Conservation Corps continues to provide the highest quality experience available.

Sincerely,

Nicholas J. Prechel  
Conservation Crew Leader – Vermont Youth Conservation Corps  
Graduate Student - Recreation, Parks and Leisure Studies Department

*P.O. Box 2000 Cortland, New York 13045-0900*

*Phone: (607) 753-4263; Fax: (607) 753-5982*

*Accredited by the National Recreation and Park Association Council on Accreditation*

**APPENDIX B:**  
Quantitative Survey

### Demographics

1. What is your gender? (circle one)	Male		Female		
2. How old are you? (circle one)	16	18	20	22	24
	17	19	21	23	Other: _____
3. Are you Hispanic or Latino? (if female, Latina)	Yes		No		
4. Which one or more of the following would you say is your race? (Circle all that apply)	White	Black or African American		Asian	
	Native Hawaiian or Other Pacific Islander	American Indian, Alaska Native		Other: _____	
5. How many seasons have you worked for the YCC? (circle one)	1 (my first season)	3	5	7	9
	2	4	6	8	Other: _____
6. What type of crew did you serve on? (circle one)	3 week crew		4 week crew		7 week crew

### Responsibility

7. I accept responsibility for my actions.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
8. I own up to my mistakes.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
9. I don't blame others for my mistakes.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
10. If I mess something up, I try to make things right.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
11. If I make a mistake, I try to fix it.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
12. If I hurt someone's feelings, I apologize.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More

Adapted from Detailed Camper Outcomes Scales - Responsibility

©2007 American Camping Association, Inc.

[www.ACAcamps.org](http://www.ACAcamps.org)

### Teamwork

13. I can be a good group leader.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
14. I can help a group be successful.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
15. I can be happy even when my group has decided to do something I don't want to do.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
16. I can appreciate opinions that are different from my own.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
17. I can place group goals above the things that I want.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
18. I can cooperate with others.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
19. I can be a team-player in a small group.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
20. I know I can get along with other people in a small group.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More

Adapted from Detailed Camper Outcomes Scales - Teamwork

©2007 American Camping Association, Inc.

[www.ACAcamps.org](http://www.ACAcamps.org)

### Independence

21. I am comfortable being away from my family.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
22. I can make good decisions even when members of my family aren't around to help me.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
23. I don't need adults to help me do things	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
24. I can do things on my own.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
25. I am independent.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
26. I can solve problems without help from my friends.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YVCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
27. I can make decisions by myself.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
28. I can make decisions without adults helping me.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More

Adapted from Detailed Camper Outcomes Scales - Independence

©2007 American Camping Association, Inc.

[www.ACACamps.org](http://www.ACACamps.org)



### Affinity for Nature

29. I enjoy being outdoors.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
30. I like being in nature.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
31. I want to spend time outdoors.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
32. I am attracted to nature.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
33. I feel free when I am outdoors.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
34. I enjoy the freedom of being outside.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
35. I feel safe in nature.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
36. I am comfortable in the outdoors.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
37. I feel part of the natural world.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More
38. I feel connected to the natural environment.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	Somewhat More	A Lot More

Adapted from Detailed Camper Outcomes Scales - Affinity for Nature (full)

©2007 American Camping Association, Inc.

[www.ACAcamps.org](http://www.ACAcamps.org)

### YCC Evaluation

39. I feel that the application process gave me a clear picture of what working for the YCC would be like.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
40. I feel that the the YCC <u>immediate dismissal policies</u> were fair and clearly communicated.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
41. I feel that the YCC <u>general crew policies</u> were fair and clearly communicated.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
42. I feel that the work completed met my expectations.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
43. I feel that the YCC has made me more aware of issues that exist in the world.	False	Somewhat False	A Little False	A Little True	Somewhat True	True
44. How would you rank your overall experience at the YCC?	One of the worst experiences I've had				One of the best experiences I've had	
	1	2	3	4	5	6
45. Will you be applying to the YCC next season?	Not Likely		Unsure		Very Likely	

Additional Comments:

**APPENDIX C:**  
Qualitative Interview Questions

**Interview Procedure:**

You have been selected to participate in an interview regarding your Youth Conservation Corps (YCC) experience. This conversation is meant to be casual with no wrong answers and strictly used to gain valuable insight into the crew members' perspective of the YCC program. I request that you answer honestly and completely and have confidence that your replies are strictly confidential and will in no way affect your job presently or in the future. As such your participation in this interview is completely voluntary and you may conclude it at any time. Your responses will help in ensuring that the YCC continues to offer the highest quality program it can for the benefit of its crew members. Do you have any questions before we begin?

Begin interview.

Thank participant for completing the interview.

Conclude interview.

**Interview Questions:** (semi-structured interview with prompts)

1. Why did you join the YCC this season?
2. What was the first day like for you? (perception of program, people)
3. Tell me about your crew.
  - a. What do you like about your crew leaders leadership style?
4. Tell me about the project that you're working on now.
  - a. What skills have you learned so far?
5. What have you enjoyed most about spending the summer outdoors?
6. How was your experience as LOD (Leader Of the Day)?
  - a. Most challenging?
  - b. What was the most beneficial part of being LOD?
7. What are your impressions of the educational program?
8. What has been your most memorable moment of the season?
9. What has been the best part of your YCC experience?
10. What could the YCC do to make this experience more enjoyable?

**APPENDIX D:**  
Survey Conditions Sheet

### **Survey Conditions**

Crew Name: \_\_\_\_\_ Date: \_\_\_\_\_

Project Name: \_\_\_\_\_ Time of Day: \_\_\_\_\_ am/pm

Project Location: \_\_\_\_\_ Estimated temperature: \_\_\_\_\_ °F

Please note the conditions under which the survey was administered: (Check all that apply)

- |                                 |  |
|---------------------------------|--|
| <input type="checkbox"/> Humid  | <input type="checkbox"/> Rain                                |
| <input type="checkbox"/> Hot    | <input type="checkbox"/> Crew tired                          |
| <input type="checkbox"/> Sunny  | <input type="checkbox"/> Crew energized                      |
| <input type="checkbox"/> Buggy  | <input type="checkbox"/> Crew rushed to do survey            |
| <input type="checkbox"/> Cloudy | <input type="checkbox"/> Crew given enough time to do survey |
| <input type="checkbox"/> Windy  | <input type="checkbox"/> Other _____                         |
| <input type="checkbox"/> Cold   |  |

Overall morale of crew (1 being low, 10 being high):

1      2      3      4      5      6      7      8      9      10

How is your project going? (1 being bad, 10 being great):

1      2      3      4      5      6      7      8      9      10

Have you had people leave off your crew in the past week?                      YES                      NO

Major injuries/illnesses in the past week?                      YES                      NO

Special Notes (i.e. rained for the past week, raccoons ate your food, just had a birthday, etc.):

**APPENDIX E:**  
Survey Checklist

July 25, 2012

Crew Leaders!

I hope that your season went well and that your projects were amazing. In this envelope you will find end of season surveys asking your crews to evaluate the YCC and to reflect back on their experience. Please have your crews fill this out as soon as possible. This will ensure that you will not be struggling to complete it on the last day and that you will not forget about it.

Please read aloud the first page to your crews. Remember back to the presentation that I gave at the end of training and your best judgment to best answer any questions that your crews might have regarding the survey. If you get really stumped, you can call me on my cell (xxx-xxx-xxxx), I will be on standby.

Please check off each box below as you complete them. The survey should take approximately 30 minutes, please plan accordingly.

- ☐ Hand out surveys to crew
- ☐ Read out loud the instructions
- ☐ Answer any questions crew members might have
- ☐ If they choose to answer, have crew members begin filling out survey
- ☐ Fill out the Survey Conditions sheet
- ☐ Collect all surveys
- ☐ Place completed surveys and any unused surveys into envelope
- ☐ Place Survey Conditions sheet into envelope
- ☐ Make sure your team name is on the outside of the envelope
- ☐ Seal the envelope
- ☐ Return envelope when you complete your other YCC exit paperwork

It is very important to me and to the YCC that the surveys are completed. I know how stressful the last few weeks can be on teams and crew leaders so I greatly appreciate your best efforts in making this a success. Thank you in advance very much for your help!

Nicholas J. Prechel



**APPENDIX F:**  
Survey Instructions

### Instructions:

Please read these instructions before turning the page and beginning the survey.

This survey will ask you about your experiences while at the YCC. The format of this survey is a bit different than you might be used to, so please take a moment to examine the sample question below.

Each question has two parts. The first part is about you. The second part, which appears just below the first part, asks you to think about yourself before and after your YCC experience. Look at the example.

For the first part of example question (B) below, the crew member indicated that the statement “I enjoy being outdoors” is a little false and circled **A Little False**.

For the second part of the question, the crew member indicated that the statement: “I enjoy being outdoors.” is **somewhat more** true today than it was before YCC by circling **Somewhat More**. This answer would indicate that while this crew member probably prefers doing things indoors, she believes that YCC helped her to enjoy the outdoors **somewhat more** today than before her experience with YCC.

B) I enjoy being outdoors.	False	Somewhat False	<b>A Little False</b>	A Little True	Somewhat True	True
Is the above statement more or less true today than before YCC?	A Lot Less	Somewhat Less	A Little Less	A Little More	<b>Somewhat More</b>	A Lot More

As you begin, please think carefully about each of your answers. It is very important to be accurate. No answers are right or wrong, and everyone will have different answers. Please indicate what you actually think for each question.

Your participation in this survey is completely voluntary. However, your responses are important to making YCC better for future crew members and by carefully completing this survey you can help us make the VYCC experience better.

If you do not understand the instructions, please ask for help from your crew leader. If you do not want to participate in the survey, please tell your crew leader and you may write in your journal. If you want to complete the survey please turn the page over and begin.

**APPENDIX G:**  
Institutional Review Board Approval

## MEMORANDUM



To: Nicholas Prechel  
Amy Shellman

From: Jena Curtis, Chair  
Institutional Review Board

Date: 5/24/2012

RE: Institutional Review Board Approval

In accordance with SUNY Cortland's procedures for human research participant protections, the protocol referenced below has been approved for a period of one year:

Title of the study: The impact of conservation corps on youth participants.			
Level of review:	Expedited	Protocol number:	111243
Project start date:	Upon IRB approval	Approval expiration date*:	5/23/2013

\* Note: Please include the protocol expiration date to the bottom of your consent form and recruitment materials. For more information about continuation policies and procedures, visit [www.cortland.edu/irb/Applications/continuations.html](http://www.cortland.edu/irb/Applications/continuations.html)

The federal Office for Research Protections (OHRP) emphasizes that investigators play a crucial role in protecting the rights and welfare of human subjects and are responsible for carrying out sound ethical research consistent with research plans approved by an IRB. Along with meeting the specific requirements of a particular research study, investigators are responsible for ongoing requirements in the conduct of approved research that include, in summary:

- obtaining and documenting informed consent from the participants and/or from a legally authorized representative prior to the individuals' participation in the research, unless these requirements have been waived by the IRB;
- obtaining prior approval from the IRB for any modifications of (or additions to) the previously approved research; this includes modifications to advertisements and other recruitment materials, changes to the informed consent or child assent, the study design and procedures, addition of research staff or student assistants, etc. (except those alterations necessary to eliminate apparent immediate hazards to subjects, which are then to be reported by email to [irb@cortland.edu](mailto:irb@cortland.edu) within three days);
- providing to the IRB prompt reports of any unanticipated problems involving risks to subjects or others;
- following the principles outlined in the Belmont Report, OHRP Policies and Procedures (Title 45, Part 46, Protection of Human Subjects), the SUNY Cortland College Handbook, and SUNY Cortland's IRB Policies and Procedures Manual;
- notifying the IRB of continued research under the approved protocol to keep the records active; and,
- maintaining records as required by the HHS regulations and NYS State law, for at least three years after completion of the study.

Institutional Review Board  
Page 2

In the event that questions or concerns arise about research at SUNY Cortland, please contact the IRB by email [irb@cortland.edu](mailto:irb@cortland.edu) or by telephone at (607)753-2511. You may also contact a member of the IRB who possesses expertise in your discipline or methodology, visit <http://www.cortland.edu/irb/members.html> to obtain a current list of IRB members.

Sincerely,



Jena Curtis, Chair  
Institutional Review Board  
SUNY Cortland

